

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION**

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**ORDER NO. R5-2007-0032  
NPDES NO. CA0078930**

**WASTE DISCHARGE REQUIREMENTS  
FOR  
CITY OF BIGGS  
WASTEWATER TREATMENT PLANT  
BUTTE COUNTY**

The following Discharger is subject to waste discharge requirements as set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	<b>City of Biggs</b>
<b>Name of Facility</b>	<b>Wastewater Treatment Plant</b>
<b>Facility Address</b>	<b>3016 Sixth Street</b>
	<b>Biggs, CA 95917</b>
	<b>Butte County</b>
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a <b>minor</b> discharge.	

The discharge by the **City of Biggs Wastewater Treatment Plant** from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>
D-001	Secondary treated municipal wastewater	39 ° , 24' , 28" N	121 ° , 43' , 32" W	Lateral K (agricultural drain – Reclamation District #833))

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Board on:	<b>May 3, 2007</b>
This Order shall become effective on:	<b>June 22, 2007</b>
This Order shall expire on:	<b>June 1, 2012</b>
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	<b><u>180 days prior to the Order expiration date</u></b>

IT IS HEREBY ORDERED, that Order No. **5-00-255** is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **May 3, 2007**.

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PAMELA C. CREEDON, Executive Officer

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## I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

**Table 1 – Facility Information**

<b>Discharger</b>	City of Biggs
<b>Name of Facility</b>	Wastewater Treatment Plant
<b>Facility Address</b>	3016 Sixth Street
	Biggs, CA 95917
	Butte County
<b>Facility Contact, Title, and Phone</b>	Mr. John Dougherty, City Manager, (530) 868-5493
<b>Mailing Address</b>	SAME
<b>Type of Facility</b>	Public Owned Treatment Works (POTW)
<b>Facility Design Flow</b>	Dry Weather Flow = 0.38 million gallons per day (mgd), Peak Wet weather flow = 1.05 mgd

## II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

- A. Background.** The City of Biggs (hereinafter Discharger) is currently discharging under Order No. 5-00-25 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078930. The Discharger submitted a Report of Waste Discharge, dated 5 May 2005, and applied for a NPDES permit renewal to discharge up to 1.05 mgd of treated wastewater from the City of Biggs Wastewater Treatment Plant, hereinafter Facility. The application was deemed complete on 19 June 2005.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B. Facility Description.** The Discharger owns and operates the City of Biggs Wastewater Treatment Plant. The treatment system consists of two aerated lagoons, a ballast pond, three plug flow rock filters in parallel, and chlorination/dechlorination facilities. Wastewater is discharged from Discharge Point 001 (see table on cover page) to the Lateral K (agricultural drain – Reclamation District #833). Lateral K is a constructed agricultural drain constructed to convey excess agricultural flows away from fields. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental

Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. Attachment F, which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, *et seq.*) in accordance with Section 13389 of the CWC.
- F. Technology-Based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR)<sup>1</sup> require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133 and/or Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- G. Water Quality-Based Effluent Limitations.** Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Based on previous California Toxic Rule (CTR) sampling, the Regional Water Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an in-stream excursions above applicable water quality standards, and therefore, water quality based effluent limitations for CTR parameters are not included in this Order for pollutants that were not already regulated by Order No. 5-00-255. Sufficient data is not available, or the data provided is questionable in regards to quality assurance/quality control issues. Additionally, some of the receiving water analytical data was from downstream of the discharge point, because there was no receiving water upstream from the discharge point at the time of the sampling events. This Order requires additional sampling and reporting to make a determination if effluent limits are required for the CTR parameters. A total of six bi-monthly samples (effluent and receiving water) during the first 12-months after

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<sup>1</sup> All further statutory references are to Title 40 of the Code of Federal Regulations unless otherwise indicated.



adoption will be collected and analyzed to determine if there is the reasonable potential of the effluent to cause an in-stream excursions above applicable water quality standards. If there is a reasonable potential, then the Order will be reopened and effluent limits will be assigned to the CTR parameters as applicable.

**H. Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition*, for the *Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan.

The Basin Plan does not specifically identify beneficial uses for *Lateral K (agricultural drain – Reclamation District #833)*. The existing beneficial uses of Lateral K are as follows: *agricultural supply; and preservation and enhancement of fish, wildlife and other aquatic resources*. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. An exception (of Resolution No. 88-63) is if the water in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, for which Lateral K is designated by the Reclamation District #833. Thus, as discussed in detail in the Fact Sheet (Attachment F), beneficial uses applicable to *Lateral K (agricultural drain- Reclamation District #833)* are as follows:

**Table 2 – Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lateral K (agricultural drain – Reclamation District #833)	<u>Existing:</u> Agricultural supply, including stock watering (AGR); warm freshwater habitat (WARM); and wildlife habitat (WILD).  <u>Groundwater:</u> Municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PRO), and agricultural supply (AGR).

Requirements of this Order specifically implement the applicable *Water Quality Control Plans*.

**I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

- J. State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the California Toxics Rule. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005.
- K. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed five years from the date that the permit is issued or reissued, nor may it extend beyond ten years from the effective date of the SIP (or 18 May 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order *does* include compliance schedules *and/or* discharge specifications. *A detailed discussion of the basis for the compliance schedule(s) and/or discharge specifications is included in the Fact Sheet (Attachment F).*
- L. Alaska Rule.** On 30 March 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, 27 April 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000 may be used for CWA purposes, whether or not approved by USEPA.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains water quality-based effluent limitations for individual pollutants. The water quality-based effluent limitations consist of restrictions on pathogens. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are more stringent than required by the CWA. Specifically, this Order includes effluent limitations for pathogens that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet. In addition,

the Regional Water Board has considered the factors in Water Code section 13241 in establishing these requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 18 May 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.
- O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- Q. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in

every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

- R. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.
- S. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

### III. DISCHARGE PROHIBITIONS

- A.** Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B.** The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provision I.A.7. [See Attachment D – Federal Standard Provisions] and Regional Water Board Standard Provision VI.A.2.g.
- C.** Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.
- D.** The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
- E.** The discharge of waste that causes violation of any narrative water quality objective contained in the Basin Plan is prohibited.
- F.** The discharge of waste that causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.
- G.** Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.
- H.** The Discharger shall not cause pollution as defined in Section 13050 of the California Water Code.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS****A. Effluent Limitations – Discharge Point 001****1. Final Effluent Limitations – Discharge Point 001**

- a. Effective immediately, the discharge of **treated wastewater** shall maintain compliance with the following effluent limitations at Discharge Point **001**, with compliance measured at Monitoring Location **M-001** as described in the attached Monitoring and Reporting Program (Attachment E):

**Table 3 – Final Effluent Limitations**

Parameter	Units	Final Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Average Dry Weather Flow	mgd	0.38	--		--	--
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	30	45	90	--	--
	lbs/day <sup>1</sup>	95	143	285	--	--
Total Suspended Solids	mg/L	45	60	90	--	--
	lbs/day <sup>1</sup>	143	190	285	--	--
pH	standard units	--	--	--	6.0	9.0
Ammonia, Total (as N)	mg/L	2.72	--	7.44	--	--
Electrical Conductivity (25° C)	umhos/cm	900	--	--	--	--

<sup>1</sup> Based on a design treatment capacity of 0.38 mgd

- b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 65 percent.
- c. **Total Residual Chlorine:** Effluent total residual chlorine shall not exceed the following:
- 0.01 mg/L as a four-day average; and
  - 0.02 mg/L as a one-hour average.
- d. **Total Coliform Organisms:** Effluent total coliform organisms concentrations shall not exceed the following:
- 23 MPN/100 mL more than once in any 30-day period; and
  - 500 MPN/100 mL at any time.

- e. **Acute Toxicity:** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay - - - - - 70%

Median for any three or more consecutive bioassays - - - - 90%

## 2. Interim Effluent Limitations

Effective immediately and ending on December 31, 2008 or upon permit reopen the discharge of treated effluent shall maintain compliance with the following interim effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location Monitoring Location M-001 as described in the attached Monitoring and Reporting Program (Attachment E). These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

**Table 4 – Interim Effluent Limitations**

Parameter	Units	Interim Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia, Total (as N)	mg/L	27	--	27	--	--

### B. Land Discharge Specifications –

1. The discharge of waste classified as “hazardous” as defined in section 2521(a) of Title 23, California Code of Regulations (CCR), or “designated”, as defined in section 13173 of the CWC, to the treatment ponds is prohibited.
2. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas (*or property owned by the Discharger*).
3. As a means of discerning compliance with Land Discharge Specification B.2, the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.
4. Ponds shall not have a pH less than 6.0 or greater than 9.0.
5. The wastewater ponds shall be managed to prevent breeding of mosquitoes. In particular:
  - a. Weeds shall be minimized;
  - b. Dead algae, vegetation, and debris shall not accumulate on the water surface.
6. Public contact with the wastewater shall be precluded through such means as fences, signs, or other acceptable alternatives.

7. The wastewater ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the non-irrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).

#### **C. Reclamation Specifications – Discharge Point - Not Applicable**

### **V. RECEIVING WATER LIMITATIONS**

#### **A. Surface Water Limitations**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Lateral K (agricultural drain – Reclamation District #833):

1. **Fecal Coliform.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen:**
  - a. The monthly median of the mean daily dissolved oxygen concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation, nor,
  - b. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH.** The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units: A one-month averaging period may be applied when calculating the pH change of 0.5 units.
9. **Pesticides:**
  - a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
  - b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
  - c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer.
  - d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).
  - e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.
  - f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations (CCR), Title 22, Division 4, Chapter 15.
  - g. Thiobencarb to be present in excess of 1.0 ug/L.
10. **Radioactivity:**
  - a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
  - b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the CCR.
11. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
12. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.



13. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
14. **Taste- or Odor-Producing Substances.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.
15. **Temperature.** The natural temperature to be increased by more than 5°F.
16. **Toxic Substances.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
17. **Turbidity.** The turbidity to increase as:
  - a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
  - b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
  - c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
  - d. More than 10 percent where natural turbidity is greater than 100 NTUs.
18. **Residual Chlorine.** Detection of residual chlorine in the receiving water in concentrations equal to or greater than 0.02 mg/L.
19. **Aquatic Communities.** Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.
20. **Water Quality Standards.** Violations of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted there under.

## **B. Groundwater Limitations**

1. The discharge shall not cause the underlying groundwater to be degraded, nor shall the discharge cause the groundwater to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.
2. Release of waste constituents from any storage, treatment, or disposal component associated with the WWTP shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the WWTP to contain waste constituents in concentrations in excess of natural background quality or that listed

below, whichever is greater:

- a. Total coliform organisms median of 2.2 MPN/100 mL over any seven-day period.
3. Groundwaters shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) based upon drinking water standards specified in Title 22, CCR.
4. Groundwaters shall not contain concentrations of radionuclides in excess of the MCLs specified in Table 4 of Section 64443 of Title 22, CCR.
5. Groundwaters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses.
6. Groundwaters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s). This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.

## VI. PROVISIONS

### A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:
  - a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 14.
  - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
    - i. Violation of any term or condition contained in this Order;

- ii. Obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
- iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
- iv. A material change in the character, location, or volume of discharge.

The causes for modification include:

- i. New regulations. New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.
- ii. Land application plans. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.
- iii. Change in sludge use or disposal practice. Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Board's own motion.

- c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, **even if this Order has not yet been modified.**

- d. If more stringent applicable water quality standards are approved, pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.
- e. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent

standard or limitation so issued or approved:

- i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or
- ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- f. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- g. By-pass (the intentional diversion of waste streams from any portion of a treatment facility or collection system, except those portions designed to meet variable effluent limits) is prohibited except under the following conditions:
  - i. by-pass is required for essential maintenance to assure efficient operation;  
**and**
  - ii. neither effluent nor receiving water limitations are exceeded;  
**and**
  - iii. the Discharger notifies the Regional Water Board ten days in advance.
- h. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- i. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- j. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.
- k. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

- I. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.
- m. Safeguard to electric power failure:
  - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
  - ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
  - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.
- n. The Discharger, upon written request of the Regional Water Board, shall file with the Regional Water Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

- i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
- ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

- iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions, which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- o. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by **31 January**. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- p. The Discharger shall submit technical reports as directed by the Executive Officer.
- q. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

Unless otherwise specified, bioassays shall be performed in the following manner:

- i. Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

- ii. Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).
- r. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
- s. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- t. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- u. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
- v. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.
- w. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
- x. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report to the Regional Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

## **B. Monitoring and Reporting Program Requirements**

1. The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.
2. Within **60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of*

*California*, adopted 2 March 2000 by the State Water Board. All peaks identified by analytical methods shall be reported.

3. This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed **within six months of adoption** of this permit. For systems installed following permit adoption, the notification system shall be installed simultaneously.

## C. Special Provisions

### 1. Reopener Provisions

- a. Upon adoption of any applicable water quality standard for receiving waters by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted there under, this permit may be reopened and receiving water limitations added.
- b. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board adopts a numeric chronic toxicity water quality objective, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.
- c. Based on the results of the six bi-monthly CTR samples, the Order may be reopened to include numeric effluent limits on chemical constituents with a reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard.



## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** The Discharger shall conduct the chronic toxicity testing specified in the Monitoring and Reporting Program. If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the narrative water quality objective for toxicity, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) to identify the causes of toxicity. Upon completion of the TIE, the Discharger shall submit a workplan to conduct a Toxicity Reduction Evaluation (TRE) and, after Regional Water Board evaluation, conduct the TRE. This Order may be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.
- b. **Permeability Study.** The Discharger shall complete a permeability study within the area potentially affected by the WWTP (in accordance with the following table). The investigation should include a technical report documenting the existing in-place clay permeability of the subsurface beneath the unlined ponds and rock filters. The clay permeability tests can be a combination of in-place (BAT<sup>TM</sup> tests) and laboratory permeability tests. Laboratory permeability testing shall be in accordance with American Society of Testing and Materials (ASTM) D 5084. For ASTM D 5084, undisturbed thin-wall tube samples should be collected (per ASTM D 1587) near the BAT<sup>TM</sup> test locations (if taken). Sample tubes should be labeled and transferred to the soils laboratory according to ASTM D 4220, Group C. Permeability results for the in-place samples shall be submitted in a technical report.

The technical report shall evaluate the permeability results with respect to each component (i.e. storage ponds, sludge drying bed, rock filters, ballast pond), and discuss the WWTP impact on groundwater quality. Where there is a possibility of the wastewater impacting the groundwater, due to high permeability rates, the technical report shall provide recommendations for necessary modifications (e.g., construct liners, WWTP component upgrade and retrofit) to achieve BPTC. Based on the results of the permeability study, this Order may be reopened and groundwater limitations added.

**Table 5 - Permeability Investigation**

Task	Compliance Date
1 - Submit workplan for permeability investigation	Within 6 months of Adoption Date of Order
2 - Sample in-place permeability adjacent to ponds and rock filters	Within 3 months of Regional Water Board approval
3 - Submit a technical report on permeability results, characterizing natural background permeability	Within 3 months of completion of Task 2

- c. **Best Practicable Treatment or Control (BPTC).** The Discharger shall submit to the Regional Water Board for approval by the Executive Officer, a work plan, including a time schedule for a comprehensive technical evaluation of the Facility's waste treatment and control, to determine BPTC of its discharge to Lateral K, to meet the requirements of State Water Board Resolution 68-16. The technical report describing the work plan and schedule shall contain a preliminary evaluation and propose a time schedule for completing the comprehensive technical evaluation. To comply with Resolution 68-16, the treatment or control of discharges of waste to waters of the state must be sufficient to provide the minimum degradation of such waters that is feasible, but in no case can the discharge cause the exceedance of applicable water quality objectives.

Following completion of the evaluation, the Discharger shall submit to the Regional Water Board a technical report describing the evaluation's results and critiquing the treatment facility with respect to BPTC. Where deficiencies are documented, the technical report shall provide recommendations for necessary modifications (e.g., new or revised salinity source control measures, facility component upgrade and retrofit) to achieve BPTC and identify the source(s) of funding and proposed schedule for modifications. The schedule shall be as short as practicable. The technical report shall include specific methods the Discharger proposes as a means to measure processes and assure continuous optimal performance of BPTC measures. The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

**Table 6 – BPTC Study**

<b>Task</b>	<b>Compliance Date</b>
1 - Submit technical report: work plan and schedule for comprehensive evaluation	Within 6 months of Adoption date of Order
2 - Commence comprehensive evaluation	Within 3 months of Regional Board approval of Technical Report
3 - Complete comprehensive evaluation	As established by Task 1 and/or 2 years following Task 2, whichever is sooner
4 - Submit technical report: comprehensive evaluation results	60 days following completion of Task 3.
5 - Submit annual report describing the overall status of BPTC implementation over the past reporting year	To be submitted in accordance with the MRP

- d. **Beneficial Use Designation.** The existing beneficial uses of Lateral K include agricultural supply and preservation and enhancement of fish, wildlife and other aquatic resources. Resolution No. 88-63, by its terms, designates all water bodies as have the municipal (MUN) beneficial use. Exceptions to Resolution No. 88-63 include surface waters in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters. The exemptions in Resolution No. 88-63 are not self-effectuating, and therefore may only be implemented through the rule-making process of a Basin Plan amendment. This Order contains a time-schedule (Provision VI Section C.7.b) for submittal of a beneficial use designation study.
- e. The Discharger shall sample the effluent and the receiving water (upstream) on a bi-monthly schedule for the first 12-months following adoption of the Order, according to the schedule in Table 7 (total of six bi-monthly samples). All sample results should be reported in the monthly monitoring reports.

**Table 7 - Summary of Effluent Sampling – Priority Pollutants**

<b>Parameter</b>	<b>Sampling Location</b>	<b>Sample Type</b>	<b>Sampling Frequency</b>	<b>Comments</b>
Priority Pollutants	R-001, M-001	Grab	Bi-Monthly (During 1 <sup>st</sup> year after adoption of Order)	Sample for entire Priority Pollutant list (Parameters #1 - #126, including pH and hardness)

- f. Within 90 days of receipt of the 6<sup>th</sup> bi-monthly effluent sample (see Monitoring and Reporting Program No. R5-2006-0032), the Discharger shall submit a report summarizing the results of the six priority pollutant sample periods and detailing whether any priority pollutant has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard, including Basin Plan numeric and narrative objective or NTR and CTR criteria. If such reasonable potential is determined, the Regional Water Board will reopen this Order and include effluent limits for those pollutants.

### 3. Best Management Practices and Pollution Prevention

- a. **Pollution Prevention Plan for Salinity.** The Discharger shall prepare a pollution prevention plan for salinity in accordance with CWC section 13263.3(d)(3) to reduce the salinity of its discharge. The minimum requirements for the pollution prevention plan are outlined in the Fact Sheet. A work plan and time schedule for preparation of the pollution prevention plan shall be completed and submitted to the Regional Water Board **within 6 months of the effective date of this Order** for approval by the Executive Officer. The Pollution Prevention Plan shall be completed and submitted to the Regional Water Board **within two (2) years following work plan approval by the Executive Officer**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program.

**Table 8 – Pollution Prevention Plan for Salinity**

Task	Compliance Date
1 - Submit technical report: work plan and schedule for pollution prevention plan	Within 6 months of Adoption date of Order
2 - Complete plan and submit to Regional Water Board	Within 2 years of Regional Board approval of Work Plan

- b. **Salinity Reduction Goal.** The Discharger shall provide to the Regional Water Board annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to Lateral K. The annual reports shall be submitted in accordance with the Monitoring and Reporting Program.

**Table 9 – Salinity Reduction Goal**

Task	Compliance Date
Submit annual reports on salinity reduction in effluent	February 1 <sup>st</sup> each year

#### 4. Construction, Operation and Maintenance Specifications

- a. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - i. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface;
  - ii. Weeds shall be minimized; and
  - iii. Dead algae, vegetation, and debris shall not accumulate on the water surface.
- b. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- c. Ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the nonirrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).
- d. Prior to the onset of the rainy season of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification VI.C.4.c.
- e. The treatment and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

#### 5. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Certified Operators.** The Discharger shall provide certified wastewater treatment plant operators in accordance with Title 23 of the California Code of Regulations, Division 3, Chapter 26.
- b. If this Order is not revised and renewed prior to expiration, then the Order shall be continued until revised and renewed, provided that adequate compliance with the requirements contained herein is maintained and that the Discharger has applied for renewal of the Order at least 180 prior to the expiration date.

c. **Sludge Disposal Requirements**

- i. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, *et seq.*
- ii. Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.
- iii. Use and disposal of sewage sludge shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503.

If the State Water Resources Control Board and the Regional Water Quality Control Boards are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

- iv. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.
- v. **By November 3, 2007**, the Discharger shall submit a sludge disposal plan describing the annual volume of sludge generated by the plant and specifying the disposal practices.

d. **Pretreatment Requirements**

- i. The Discharger shall implement, as more completely set forth in 40 CFR 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:
  - a) Wastes which create a fire or explosion hazard in the treatment works;
  - b) Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;

- c) Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;
  - d) Any waste, including oxygen demanding pollutants (BOD, *etc.*), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;
  - e) Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F), unless the Regional Water Board approves alternate temperature limits;
  - f) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - g) Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and
  - h) Any trucked or hauled pollutants, except at points predesignated by the Discharger.
- ii. The Discharger shall implement, as more completely set forth in 40 CFR 403.5, the legal authorities, programs, and controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:
- a) Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or
  - b) Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.
- e. **Collection System Requirements**

On May 2, 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order 2006-0003 and any future revisions thereto. Order 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR

- f. This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed **within twelve months of adoption** of this permit. For systems installed following permit adoption, the notification system shall be installed simultaneously.

## 6. Other Special Provisions

- a. The Discharger shall use the best practicable treatment or control technique currently available to limit mineralization to no more than a reasonable.
- b. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- c. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (530) 224-4845 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [40 CFR §122.41(l)(6)(i)].



- d. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in the Federal Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, *etc.*) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.
- e. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Board (Division of Water Rights).
- f. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision V.B and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

## 7. Compliance Schedules

**Ammonia Compliance Schedule:** This Order contains effluent limitations based on water quality criteria for Non-CTR constituents such as ammonia. The interim water quality based effluent limitations for ammonia required by this Order shall be effective until December 31, 2008 or upon permit reopener.

- a. **Ammonia Compliance Work Plan.** The Discharger shall submit a work plan to evaluate 1) the treatment plant operations to determine the degree of ammonia removal that is occurring at the plant and the total ammonia removal capability based on the current treatment system and 2) the potential upgrades to the Facility necessary to comply with the Final Effluent Limitations IV.A.1.a for ammonia. If the results of the Work Plan determine that the Facility cannot comply with the Final Effluent Limitations, then the Work Plan must also address alternative treatment and disposal methods and a time schedule for compliance.

The Discharger shall comply with the following schedule for this Work Plan:

**Table 10 – Ammonia Compliance Work Plan**

<b>Task</b>	<b>Compliance Date</b>
Submit a work plan to the Regional Water Board for Approval	Within 3 months of Adoption Date of Order
Begin implementing work plan	Within 3 months of Regional Water Board approval of work plan
Complete work plan and submit results to Regional Water Board	Within 9 months of work plan Approval
Begin implementation of work plan	Within 60 days following EO written approval of work plan
Achieve full compliance	By the deadline approved by EO, but no later than permit expiration

As this compliance schedule is greater than one year, the Discharger shall submit semi-annual progress reports on 1 February and 1 August of each year until the Discharger achieves compliance with the final water quality based effluent limitations for ammonia.

- b. **Beneficial Use Designation Study.** The Discharger shall submit a work plan to evaluate 1) the existing beneficial uses of Lateral K, 2) investigate the previous (since November 28, 1975) and anticipated beneficial uses of Lateral K, 3) quality of water in Lateral K, and 4) quantity of water in Lateral K. The work plan must contain enough technical information for the Regional Board to process a Basin Plan amendment, to potentially remove the beneficial use of MUN from Lateral K.

The Discharger shall comply with the following schedule for this Study:

**Table 11– Beneficial Use Designation Study**

<b>Task</b>	<b>Compliance Date</b>
Submit a work plan to the Regional Water Board for Approval	Within 3 months of Adoption Date of Order
Begin implementing work plan	Within 3 months of Regional Water Board approval of work plan
Complete work plan and submit results to Regional Water Board	Within 9 months of work plan Approval

## VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

- A. BOD and TSS Effluent.** Compliance with the final effluent limitations for BOD and TSS required in sections IV.A.1.b., IV.A.1.c., IV.A.1.d., and IV.A.2.a. shall be ascertained by 24-hour composite samples. Compliance with effluent limitations for percent removal shall be calculated using the arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.
- B. Total Coliform Organisms Effluent Limitations.** For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last seven days for which analyses have been completed. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 23 per 100 milliliters, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.
- C. Average Daily Discharge Flow Effluent Limitations.** The Average Daily Discharge Flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the Average Daily Discharge Flow effluent limitations will be measured at times when groundwater is at or near normal and runoff is not occurring.
- D. Total Residual Chlorine.** Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some

chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive.

## ATTACHMENT A – DEFINITIONS

**Acute Toxic Unit ( $TU_a$ ):** the reciprocal of the effluent concentration that causes 50 percent of the organisms to die in an acute toxicity test ( $TU_a = 100/LC_{50}$ ) (see  $LC_{50}$ )

**Average Four-Day Effluent Limitation:** the highest allowable average of daily discharges over a four-day period, calculated as the sum of all daily discharges measured during a four-day period divided by the number of daily discharges measured during that four-day period.

**Average Hourly Effluent Limitation:** the highest allowable average of discharges over a one-hour period, calculated as the sum of all discharges measured during that one-hour period divided by the number of discharges measured during that one-hour period.

**Average Monthly Effluent Limitation (AMEL):** the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Average Weekly Effluent Limitation (AWEL):** the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Best Practicable Treatment or Control (BPTC):** BPTC is a requirement of State Water Board Resolution 68-16 – “Statement of Policy with Respect to Maintaining High Quality of Waters in California” (referred to as the “Antidegradation Policy”). BPTC is the treatment or control of a discharge necessary to assure that, “(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.” Pollution is defined in CWC Section 13050(I). In general, an exceedance of a water quality objective in the Basin Plan constitutes “pollution”.

**Biosolids:** sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

**Chronic Toxic Unit ( $TU_c$ ):** the reciprocal of the effluent concentration that causes no observable effect on the test organisms in a chronic toxicity test ( $TU_c = 100/NOEC$ ) (see NOEC)

**Daily Discharge:** Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

**Effect Concentration (EC):** a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g. death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g. Probit Model).  $EC_{25}$  is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

**Inhibition Concentration (IC):** a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g. reproduction or growth), calculated from a continuous model (e.g. Interpolation Method).  $IC_{25}$  is a point estimate of the toxicant concentration that would cause a 25 percent reduction in a non-lethal biological measurement.

**Instantaneous Maximum Effluent Limitation:** the highest allowable value for any single grab sample or aliquot (*i.e.*, each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

**Instantaneous Minimum Effluent Limitation:** the lowest allowable value for any single grab sample or aliquot (*i.e.*, each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

**$LC_{50}$ , Lethal Concentration, 50 percent:** the toxic or effluent concentration that would cause death in 50 percent of the test organisms over a specified period of time.

**LOEC, Lowest Observed Effect Concentration:** the lowest concentration of an effluent or toxicant that results in adverse effects on the test organism (*i.e.* where the values for the observed endpoints are statistically different from the control).

**Maximum Daily Effluent Limitation (MDEL):** the highest allowable daily discharge of a pollutant.

**Most Probable Number (MPN):** the MPN is the number which makes the observed outcome most probable.

**NOEC, No Observed Effect Concentration:** the highest tested concentration of an effluent or test sample whose effect is not different from the control effect, according to the statistical test used (see LOEC). The NOEC is usually the highest tested concentration of an effluent or toxic

that causes no observable effects on the test organisms (i.e. the highest concentration of toxicity at which the values for the observed responses do not statistically differ from the controls).

**Percent Removal:** the arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

**Residual Sludge:** sludge that will not be subject to further treatment at the Facility.

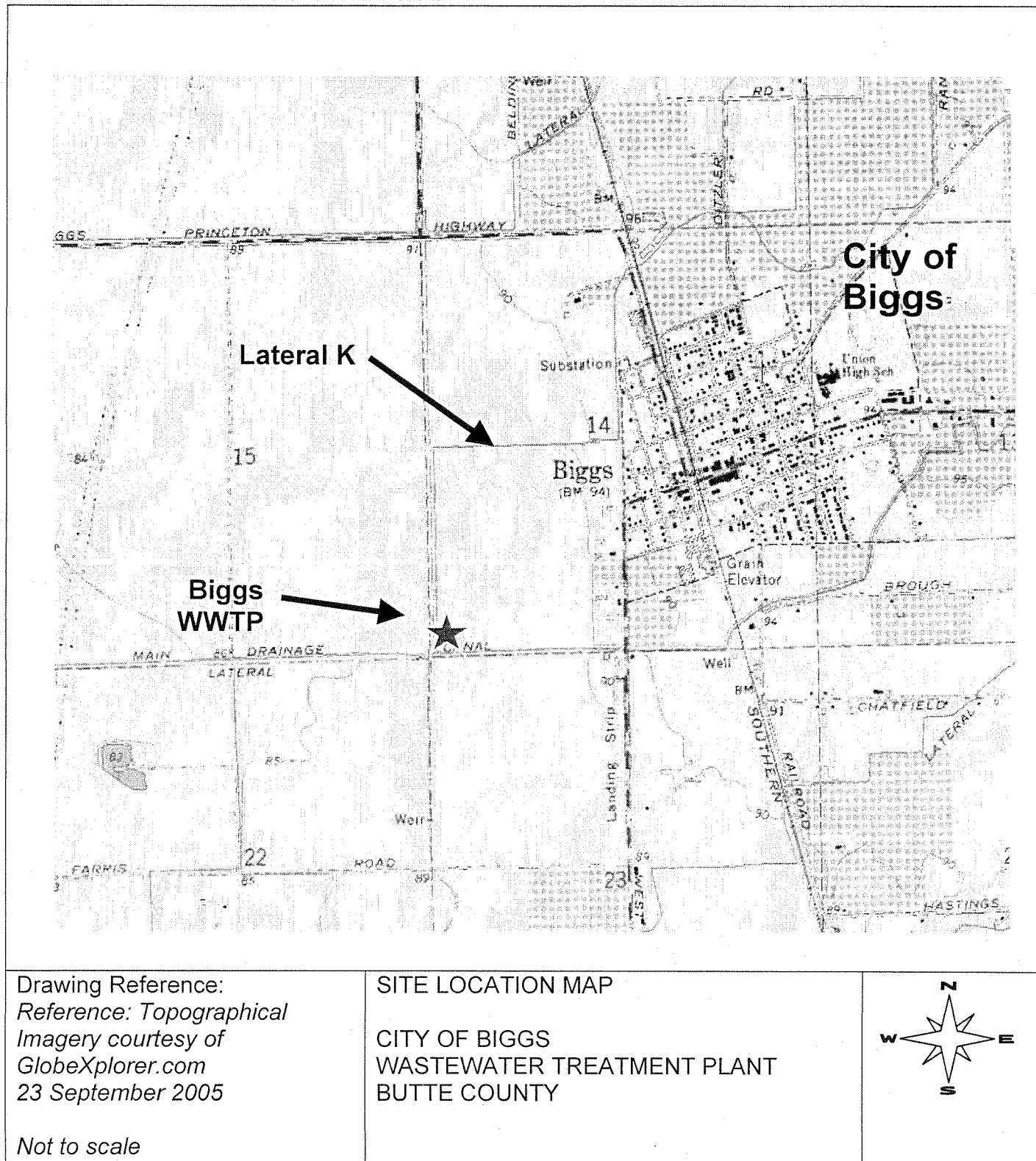
**Sludge:** the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes.

**Solid Waste:** grit and screening material generated during preliminary treatment.

**Toxicity Test:** the procedure using living organisms to determine whether a chemical or an effluent is toxic. A toxicity test measures the degree of the effect of a specific chemical or effluent on exposed test organisms.

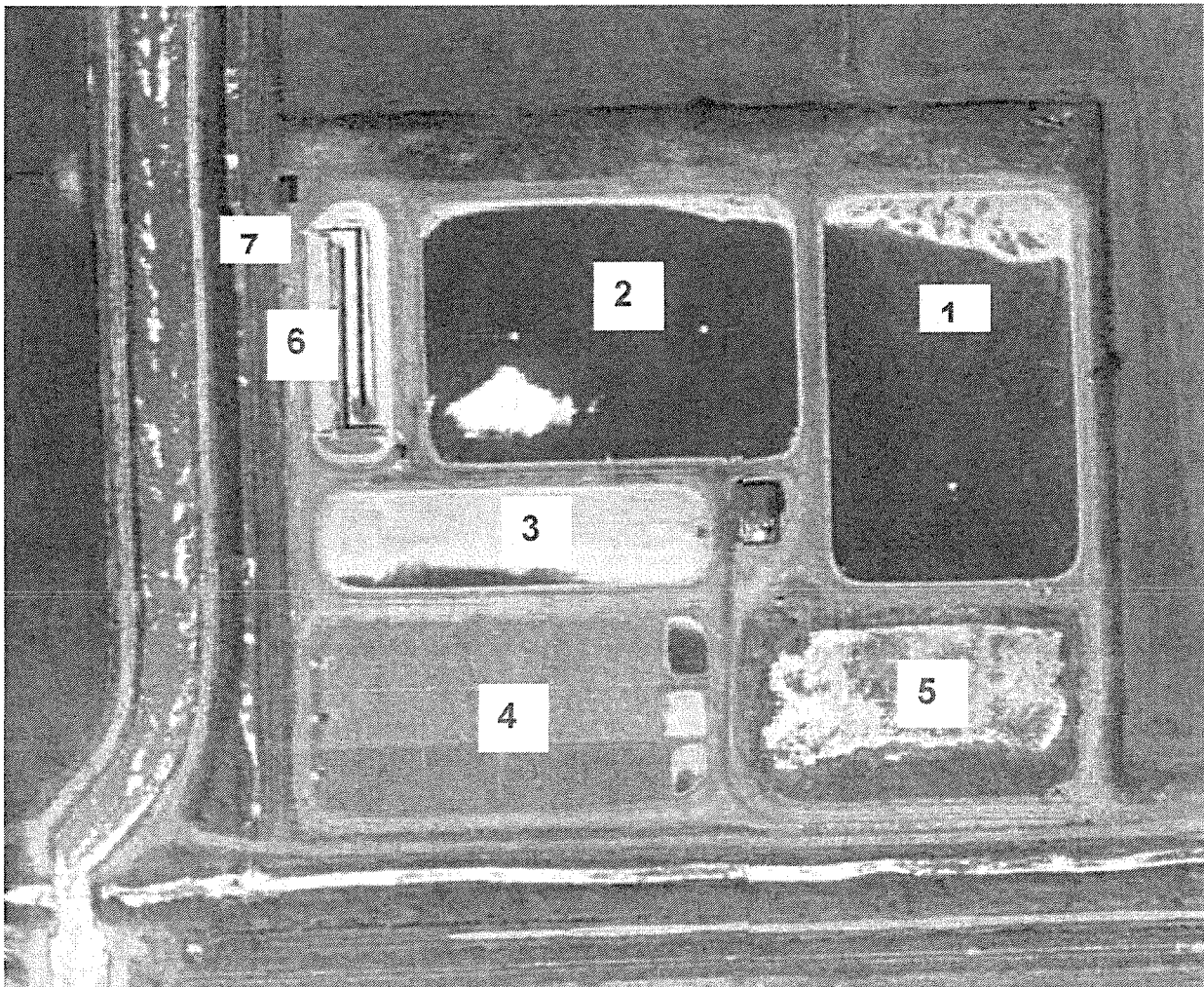
**Toxic Unit:** the measure of toxicity in an effluent as determined by the acute toxic units (TU<sub>a</sub>) or chronic toxic units (TU<sub>c</sub>) measured. The larger the TU, the greater the toxicity.

ATTACHMENT B-1 – TOPOGRAPHIC MAP





## ATTACHMENT B-2 – AERIAL PHOTOGRAPH



### EXPLANATION:

1 - Pond #1  
2 - Pond #2  
3 - Ballast Pond  
4 - Rock filters

5 - Sludge Drying Beds  
6 - Chlorine Contact Basin  
7- Discharge Point D-001

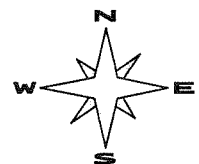
### Drawing Reference:

*Reference: Aerial Imagery  
courtesy of GlobeXplorer.com  
23 September 2005*

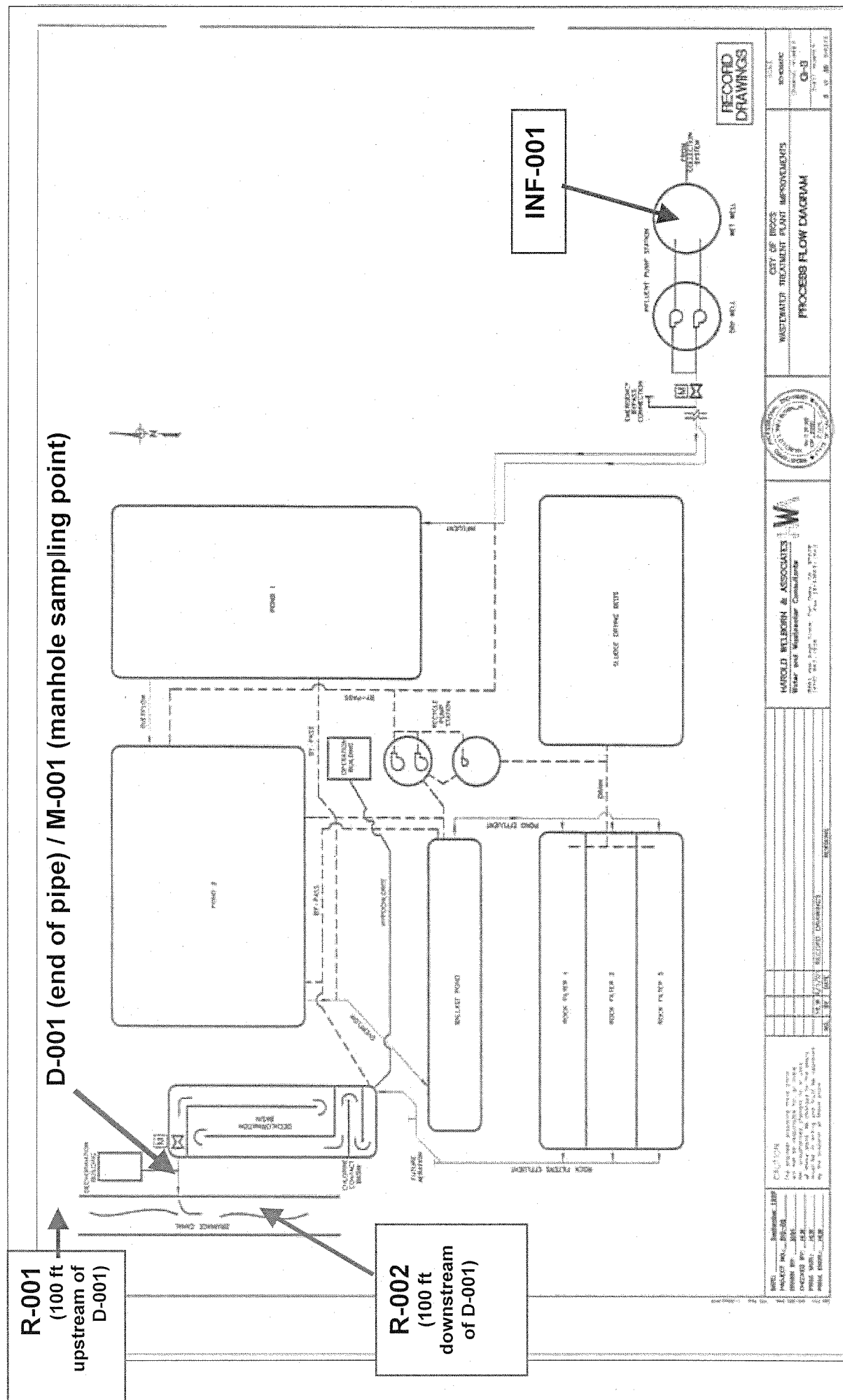
*Not to scale*

### SITE LOCATION MAP

CITY OF BIGGS  
WASTEWATER TREATMENT PLANT  
BUTTE COUNTY



## ATTACHMENT C – FLOW SCHEMATIC



## **ATTACHMENT D – FEDERAL STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [40 CFR §122.41(a)].
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [40 CFR §122.41(a)(1)].

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [40 CFR §122.41(c)].

#### **C. Duty to Mitigate**

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [40 CFR §122.41(d)].

#### **D. Proper Operation and Maintenance**

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [40 CFR §122.41(e)].

## **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR §122.41(g)].
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [40 CFR §122.5(c)].

## **F. Inspection and Entry**

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [40 CFR §122.41(i)] [CWC 13383(c)]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [40 CFR §122.41(i)(1)];
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 CFR §122.41(i)(2)];
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [40 CFR §122.41(i)(3)];
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [40 CFR §122.41(i)(4)].

## **G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [40 CFR §122.41(m)(1)(i)].
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does

not mean economic loss caused by delays in production [40 CFR §122.41(m)(1)(ii)].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below [40 CFR §122.41(m)(2)].
3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [40 CFR §122.41(m)(4)(i)]:
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 CFR §122.41(m)(4)(A)];
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [40 CFR §122.41(m)(4)(B)]; and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [40 CFR §122.41(m)(4)(C)].
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [40 CFR §122.41(m)(4)(ii)].
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [40 CFR §122.41(m)(3)(i)].
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) [40 CFR §122.41(m)(3)(ii)].

## H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [40 CFR §122.41(n)(1)].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [40 CFR §122.41(n)(2)].
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 CFR §122.41(n)(3)]:
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR §122.41(n)(3)(i)];
  - b. The permitted facility was, at the time, being properly operated [40 CFR §122.41(n)(3)(i)];
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) [40 CFR §122.41(n)(3)(iii)]; and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 CFR §122.41(n)(3)(iv)].
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [40 CFR §122.41(n)(4)].

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [40 CFR §122.41(f)].

## **B. Duty to Reapply**

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [40 *CFR* §122.41(b)].

## **C. Transfers**

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [40 *CFR* §122.41(l)(3)] [40 *CFR* §122.61].

## **III. STANDARD PROVISIONS – MONITORING**

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 *CFR* §122.41(j)(1)].
- B. Monitoring results must be conducted according to test procedures under 40 *CFR* Part 136 or, in the case of sludge use or disposal, approved under 40 *CFR* Part 136 unless otherwise specified in 40 *CFR* Part 503 unless other test procedures have been specified in this Order [40 *CFR* §122.41(j)(4)] [40 *CFR* §122.44(i)(1)(iv)].

## **IV. STANDARD PROVISIONS – RECORDS**

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 *CFR* Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 *CFR* §122.41(j)(2)].
- B. Records of monitoring information shall include:
  - 1. The date, exact place, and time of sampling or measurements [40 *CFR* §122.41(j)(3)(i)];
  - 2. The individual(s) who performed the sampling or measurements [40 *CFR* §122.41(j)(3)(ii)];

3. The date(s) analyses were performed [40 CFR §122.41(j)(3)(iii)];
4. The individual(s) who performed the analyses [40 CFR §122.41(j)(3)(iv)];
5. The analytical techniques or methods used [40 CFR §122.41(j)(3)(v)]; and
6. The results of such analyses [40 CFR §122.41(j)(3)(vi)].

**C. Claims of confidentiality for the following information will be denied [40 CFR §122.7(b)]:**

1. The name and address of any permit applicant or Discharger [40 CFR §122.7(b)(1)]; and
2. Permit applications and attachments, permits and effluent data [40 CFR §122.7(b)(2)].

**V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [40 CFR §122.41(h)] [CWC 13267].

**B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [40 CFR §122.41(k)].
2. All permit applications shall be signed as follows:
  - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility



- including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [40 CFR §122.22(a)(1)];
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [40 CFR §122.22(a)(2)]; or
  - c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [40 CFR §122.22(a)(3)].
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in paragraph (2.) of this provision [40 CFR §122.22(b)(1)];
  - b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [40 CFR §122.22(b)(2)]; and
  - c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [40 CFR §122.22(b)(3)].
4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board, or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [40 CFR §122.22(d)].*

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [40 CFR §122.41(l)(4)].
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [40 CFR §122.41(l)(4)(i)].
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 CFR §122.41(l)(4)(ii)].
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [40 CFR §122.41(l)(4)(iii)].

### **D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [40 CFR §122.41(l)(5)].

### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of

the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR §122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR §122.41(l)(6)(ii)]:
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(A)].
  - b. Any upset that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(B)].
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [40 CFR §122.41(l)(6)(iii)].

#### **F. Planned Changes**

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [40 CFR §122.41(l)(1)]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [40 CFR §122.41(l)(1)(i)]; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this Order. [40 CFR Section 122.41(l)(1)(ii)].
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [40 CFR §122.41(l)(1)(iii)].

### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [40 CFR §122.41(l)(2)].

### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above [40 CFR §122.41(l)(7)].

### **I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information [40 CFR §122.41(l)(8)].

## **VI. STANDARD PROVISIONS – ENFORCEMENT—NOT APPLICABLE**

## **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

### **A. Publicly-Owned Treatment Works (POTWs)**

All POTWs shall provide adequate notice to the Regional Water Board of the following [40 CFR §122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [40 CFR §122.42(b)(1)]; and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [40 CFR §122.42(b)(2)].
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [40 CFR §122.42(b)(3)].

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## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

### **I. GENERAL MONITORING PROVISIONS**

- A. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
- B. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.
- C. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.
- D. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code Section 13176, and must include quality assurance/quality control data with their reports.

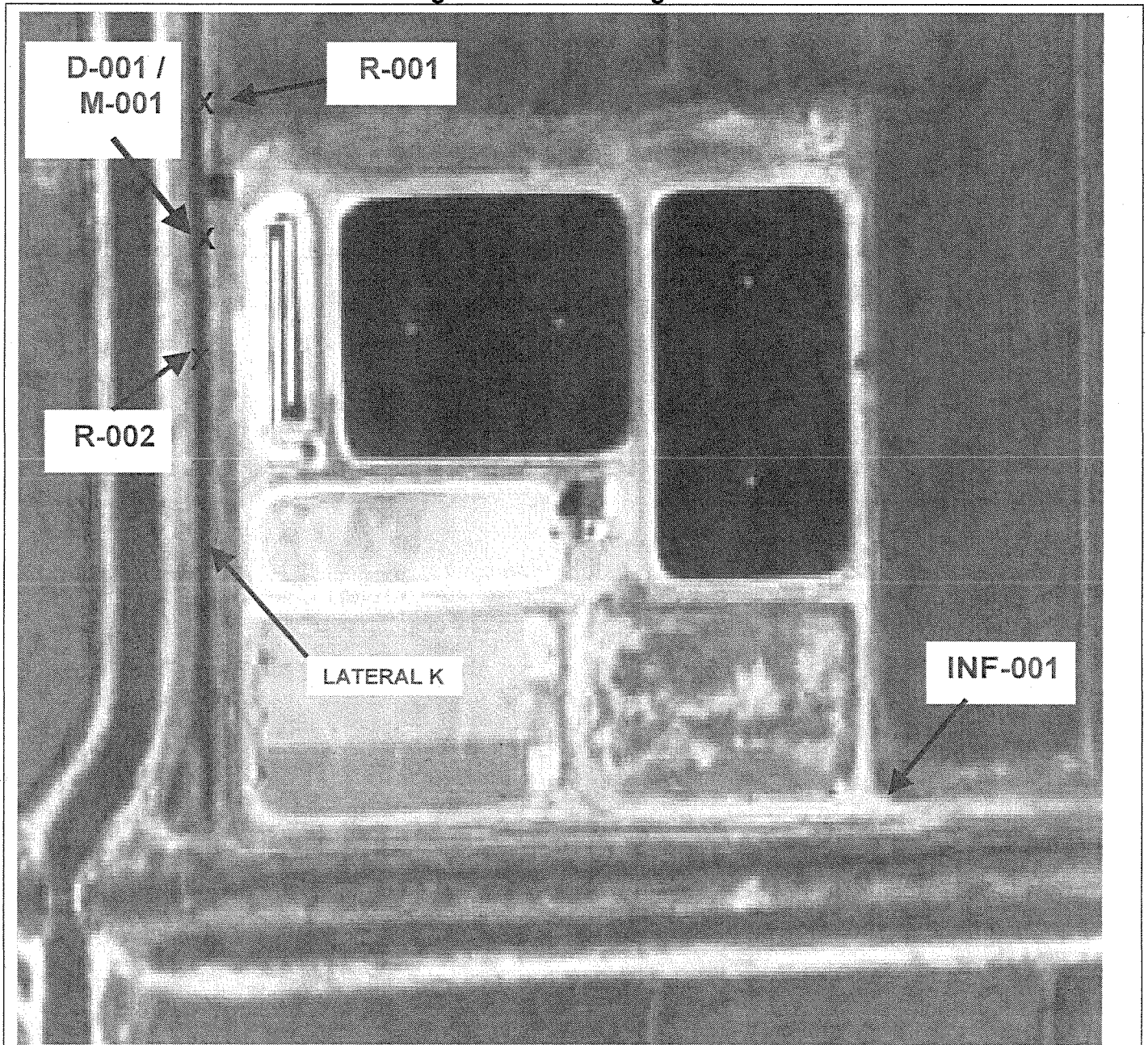
### **II. MONITORING LOCATIONS**

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1 – Monitoring Location Summary**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Domestic Influent to Facility
D-001	M-001	Effluent sample point – last connection through which wastes can be admitted into the outfall
--	R-001	Lateral K - Upstream receiving water sample – 100 feet upstream of Discharge Point D-001
--	R-002	Lateral K - Downstream receiving water sample – 100 feet downstream of Discharge Point D-001

**Figure E-1**  
**Receiving Water Monitoring Locations**



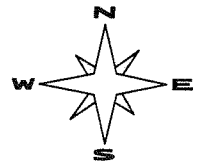
Drawing Reference:

*Reference: Aerial Imagery  
courtesy of GlobeXplorer.com  
23 September 2005*

*Not to scale*

SITE LOCATION MAP

CITY OF BIGGS  
WASTEWATER TREATMENT PLANT  
BUTTE COUNTY





### III. INFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location INF-001

Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent for the period sampled. The Discharger shall monitor influent to the facility at INF-001 as follows:

**Table E-2 – Monitoring Location INF-001 Summary**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
5-Day BOD	mg/L, lbs/day	24-hr. Composite <sup>1</sup>	Weekly	
Total Suspended Solids	mg/L, lbs/day	24-hr. Composite <sup>1</sup>	Weekly	
Priority Pollutants	ug/l	24-hr. Composite <sup>1</sup>	Annually	
Flow	mgd	Meter	Continuous	
<sup>1</sup> 24-hour flow proportioned composite				

### IV. EFFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location M-001

1. Effluent samples shall be collected downstream from the last connection through which wastes can be admitted into the outfall, following the last unit process. Effluent samples should be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. The Discharger shall monitor treated wastewater at M-001 as follows:

**Table E-3 – Monitoring Location M-001 Summary**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	
Total Residual Chlorine <sup>1</sup>	mg/L	Meter	Continuous	
pH	standard units	Meter	Weekly	
BOD 5-day 20°C	mg/L, lbs/day	24-hr. Composite <sup>2</sup>	Weekly	
Total Suspended Solids	mg/L, lbs/day	24-hr Composite <sup>2</sup>	Weekly	
Ammonia, Total (as N) <sup>3, 4</sup>	mg/L	Grab	Weekly	
Nitrate (as N)	mg/L	Grab	Semi-monthly	
Total Coliform Organisms	MPN/100 mL	Grab	Weekly	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Weekly	
Temperature <sup>5</sup>	°F	Grab	Monthly	
Priority Pollutants <sup>6, 7</sup>	ug/l	Grab	Annually <sup>8</sup>	
Acute/Chronic Toxicity	% Survival	24-hr Composite <sup>2</sup>	Semi-Annual/Annual	

<sup>1</sup> Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.

<sup>2</sup> 24-hour flow proportioned composite

<sup>3</sup> Concurrent with biotoxicity monitoring

<sup>4</sup> Report as both Total and Un-ionized ammonia with corresponding pH and temperature measurement

<sup>5</sup> Effluent Temperature monitoring shall be at the Outfall location

<sup>6</sup> For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

<sup>7</sup> Concurrent with receiving surface water sampling.

<sup>8</sup> Full Priority Pollutant sampling should occur on a bi-monthly frequency for a one-year period following Order adoption.

**B. Monitoring Location – NOT APPLICABLE**

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Acute Toxicity Testing.

The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – the Discharger shall perform semi-annual acute toxicity testing, concurrent with effluent ammonia sampling
2. Sample Types – For static non-renewal and static renewal testing, the samples shall be 24-hour, flow-proportional composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location M-001.
3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute bioassays tests shall be conducted in accordance with EPA-821-R-02-012, Fifth Edition, or later amendment with Executive Officer approval. Temperature, total residual chlorine, ammonia, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed seven (7) business days following notification of test failure.

### B. Chronic Toxicity Testing.

The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – the Discharger shall perform annual three-species, chronic toxicity testing.
2. Sample Types – Effluent samples shall be flow-proportional, 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location M-001. The receiving water control shall be a grab sample obtained from the upstream sampling location R-001 sampling location, as identified in the Monitoring and Reporting Program.

3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
  - a. The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
  - b. The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
  - c. The green alga, *Selenastrum capricornutum* (growth test).
5. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002, or later amendment with Executive Officer approval.
6. Reference Toxicant – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
7. Dilutions – The chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).

*Note: If the receiving water is toxic, laboratory control water may be used as the diluent, in which case, the receiving water should still be sampled and tested to provide evidence of its toxicity.*

**Table E-4 - Chronic Toxicity Testing Dilution Series**

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

8. Test Failure – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:

- a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
- b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Special Provisions VI.C.2.a).

### C. WET Testing Notification Requirements

The Discharger shall notify the Regional Water Board within 24 hours after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

### D. WET Testing Reporting Requirements

All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
  - a. The results expressed in TUc, measured as 100/NOEC, and also measured as 100/LC<sub>50</sub>, 100/EC<sub>25</sub>, 100/IC<sub>25</sub>, and 100/IC<sub>50</sub>, as appropriate.
  - b. The statistical methods used to calculate endpoints;
  - c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
  - d. The dates of sample collection and initiation of each toxicity test; and
  - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly Discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE.

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly Discharger self-monitoring reports and reported as percent survival.
3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.
4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
  - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
  - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
  - c. Any information on deviations or problems encountered and how they were dealt with.

## VI. LAND DISCHARGE MONITORING REQUIREMENTS

### A. Pond Monitoring

1. Pond/lagoon monitoring shall be conducted when water is present in the pond(s)/lagoon(s). All pond/lagoon samples shall be grab samples. The Discharger shall monitor all **Pond(s)**, at a minimum as follows:

**Table E-5 - Summary of Pond Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	Feet <sup>1</sup>	Grab	Weekly	
Dissolved Oxygen	mg/L	Grab	Weekly	
General conditions of dikes around ponds	Visual	NA	Weekly	
<sup>1</sup> Freeboard shall be monitored to the nearest tenth of a foot.				

### B. Monitoring Location – NOT APPLICABLE

## VII. RECLAMATION MONITORING REQUIREMENTS - NOT APPLICABLE

### A. Monitoring Location – NOT APPLICABLE

### B. Monitoring Location – NOT APPLICABLE

## VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

### A. Receiving Water Monitoring Location R-001 and R-002

1. The Discharger shall monitor R-001 and R-002 as follows:

**Table E-6 – Receiving Water Monitoring Summary**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH <sup>1</sup>	Number	Grab	Weekly	
Turbidity <sup>1</sup>	NTU	Grab	Monthly	
Dissolved Oxygen <sup>1</sup>	mg/L	Grab	Monthly	
Temperature <sup>1</sup>	°F	Grab	Weekly	
Fecal Coliform Organisms	MPN/100 mL	Grab	Monthly	
Electrical Conductivity <sup>1</sup>	umhos/cm	Grab	Monthly	
Ammonia, Total (as N) <sup>2</sup>	mg/L	Grab	Monthly	
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	Quarterly	
Priority Pollutants <sup>3</sup>	ug/L	Grab	Annually <sup>4</sup>	
<sup>1</sup> A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the WWTP <sup>2</sup> Temperature and pH shall be determined at the time of sample collection <sup>3</sup> Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the <i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> (known as the State Implementation Plan). <sup>4</sup> Full Priority Pollutant sampling should occur on a bi-monthly frequency for a one-year period following Order adoption				

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by Stations R-001 and R-002. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monthly monitoring reports.

**B. Groundwater Monitoring –Not Applicable**

**IX. OTHER MONITORING REQUIREMENTS**

**A. Water Supply Monitoring—Monitoring Location S-001**

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. The Discharger shall monitor **the municipal water supply** at **S-001** as follows:

**Table E-7 - Summary of Water Supply Monitoring**

Parameter <sup>2</sup>	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Electrical Conductivity <sup>1</sup>	umhos/cm	Grab	Annually	
Standard Minerals <sup>2</sup>	mg/L	Grab	Annually	
<sup>1</sup> If the water supply is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations. <sup>2</sup> Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).				

**B. Pond Monitoring – Not Applicable**

**C. Pretreatment Monitoring Program Monitoring – Not Applicable**

**D. Sludge Monitoring—Sludge Drying Bed**



1. A composite sample of sludge shall be collected when sludge is removed from the ponds for disposal in accordance with USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the metals listed in Title 22.
2. Sampling records shall be retained for a minimum of **five years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.
3. Upon removal of sludge, the Discharger shall submit characterization of sludge quality, including sludge percent solids and quantitative results of chemical analysis for the priority pollutants listed in 40 CFR 122 Appendix D, Tables II and III (excluding total phenols). Suggested methods for analysis of sludge are provided in USEPA publications titled "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods" and "Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater". Recommended analytical holding times for sludge samples should reflect those specified in 40 CFR 136.6.3(e). Other guidance is available in USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989.

## **X. REPORTING REQUIREMENTS**

### **A. General Monitoring and Reporting Requirements**

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the reported analytical result are readily discernible. The data shall be summarized in such a manner to clearly illustrate whether the discharge complies with waste discharge requirements. Monthly maximums, minimums, and averages shall be reported for each monitored constituent and parameter. Removal efficiencies (%) for biochemical oxygen demand and total suspended solids and all periodic averages and medians for which there are limitations shall also be calculated and reported.
4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.
5. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.

### **B. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs in accordance with the requirements described in subsection B.5 below. The CIWQS Web site will

provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. Additionally, the Discharger shall report in the SMR the results of any **special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan** required by Special Provisions of this Order. The Discharger shall submit **monthly** SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. An example of a monitoring form is provided in Attachment H.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-8 - Summary of SMR Submittals**

<b>Sampling Frequency</b>	<b>Monitoring Period Begins On...</b>	<b>Monitoring Period</b>	<b>SMR Due Date</b>
Continuous	<b>May 3, 2007</b>	All	Submit on 30 <sup>th</sup> day following month of sampling
Daily	<b>May 3, 2007</b>	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit on 30 <sup>th</sup> day following month of sampling
Weekly	<b>May 6, 2007</b>	Sunday through Saturday	Submit on 30 <sup>th</sup> day following month of sampling
Monthly	<b>June 1, 2007</b>	1 <sup>st</sup> day of calendar month through last day of calendar month	Submit on 30 <sup>th</sup> day following month of sampling
Quarterly	<b>July 1, 2007</b>	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	Submit on 30 <sup>th</sup> day following month of sampling
Semiannually	<b>July 1, 2007</b>	January 1 through June 30 July 1 through December 31	Submit on July 30 <sup>th</sup> and January 30 <sup>th</sup> each year
Annually	<b>July 1, 2007</b>	January 1 through December 31	Submit on January 30 <sup>th</sup> each year

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (*i.e.*, the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. The Discharger shall submit hard copy SMRs (with an original signature) when required by subsection B.1 above in accordance with the following requirements:
    - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.
    - b. The Discharger shall attach a cover letter to the SMR. The cover letter should correctly identify the Facility and the Discharger, along with the Order number and NPDES number. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and

a description of the violation.

- c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

California Regional Water Quality Control Board  
Central Valley Region-Redding Office  
415 Knollcrest Drive, Suite 100  
Redding, CA 96002

- d. A copy of a sample monitoring form has been provided in Attachment H, which summarizes the reporting for the facility.

### C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board  
Discharge Monitoring Report Processing Center  
Post Office Box 671  
Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

### D. Other Reports

1. **Sludge Disposal.** The Discharger shall submit a sludge disposal plan describing the annual volume of sludge generated by the plant and specifying the disposal practices by **January 30** each year.

2. **Annual Operations Report.** By **January 30** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
  - a. The names, certificate grades, and general responsibilities of all persons employed at the WWTP.
  - b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
  - c. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
  - d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
  - e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.
3. **Progress Reports.** As specified in the compliance time schedules required in Special Provisions VI, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

**Table E-9 - Summary of Progress Report Requirements**

<b>Special Provision</b>	<b>Reporting Requirements</b>
Pollution Prevention Plan for Salinity	<b>30 January and 30 July (semi-annual)</b> , until final compliance
Salinity Reduction Goal	<b>30 January and 30 July (semi-annual)</b> , until final compliance
Ammonia Removal Study	<b>30 January and 30 July (semi-annual)</b> , until final compliance
BPTC	<b>30 January and 30 July (semi-annual)</b> , until final compliance
Permeability Study	<b>30 January and 30 July (semi-annual)</b> , until final compliance

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## ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This renewed Order regulates the discharge of up to **0.38** million gallons per day (mgd), design average dry weather flow (ADWF), of effluent from the **City of Biggs Wastewater Treatment Plant**. This Order includes *effluent, groundwater, water supply, sludge, and surface water limitations, monitoring and reporting requirements, additional study requirements, and reopener provisions for effluent and groundwater constituents.*

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1 - Facility Information**

WDID	5A040100001
Discharger	City of Biggs
Name of Facility	Wastewater Treatment Plant
Facility Address	3016 Sixth Street
	Biggs, CA 95917
	Butte County
Facility Contact, Title and Phone	Mr. John Dougherty, City Manager, (530) 868-5493
Authorized Person to Sign and Submit Reports	Mr. Hayden Wasser, Plant Operator, (530) 868-5685
Mailing Address	SAME
Billing Address	P.O. Box 307, Biggs, CA 95917
Type of Facility	POTW
Major or Minor Facility	Minor
Threat to Water Quality	Category 2
Complexity	Category B
Pretreatment Program	N
Reclamation Requirements	Not Applicable
Facility Permitted Flow	0.38 (in million gallons per day) – Average Dry Weather Flow
Facility Design Flow	0.38 (in million gallons per day) – Design Dry Weather Flow
Watershed	Sacramento River
Receiving Water	Lateral K, an agricultural drain – Reclamation District #833
Receiving Water Type	Agricultural drain

- A. The City of Biggs (hereinafter Discharger) is the owner and operator of the City of Biggs Wastewater Treatment Plant (hereinafter Facility), a secondary treatment wastewater plant.
- B. The Facility discharges wastewater to Lateral K, an agricultural – Reclamation District #833 and is currently regulated by Order Number 5-00-255 which was adopted on December 8, 2000 and expired on December 1, 2005. The terms of the existing Order automatically continued in effect after the permit expiration date.
- C. **Current Enforcement Actions.** There is currently a Cease and Desist Order (Order No. 95-080 and amended Order No. 99-056) for the Discharger to construct upgraded plant processes regarding violations of waste discharge requirements of Order No. 95-002 (specifically effluent coliform, chlorine, BOD and total suspended solids). The Discharger has completed the upgraded plant processes (consisting of three plug flow rock filters, and a permanent chlorination/dechlorination facility). The Cease and Desist Order (No. 95-080 and No. 99-056) are being rescinded under a separate order.
- D. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on May 19, 2005. Supplemental information was received on June 6, 2005. A site visit was conducted on April 19, 2006, to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the City of Biggs and serves a population of approximately 1,800. The WWTP design average dry weather flow capacity is 0.38 mgd.

### A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at this facility consists of two aerated lagoons, a ballast pond, three plug flow rock filters in parallel, chlorination/dechlorination facilities, and a sludge drying bed.

### B. Discharge Points and Receiving Waters

The treatment plant is in Section 14, T18N, R2E, MDB&M, as shown on Attachment B, a part of this Order. (\*The treatment plant is on property owned by the City of Biggs.) Treated municipal wastewater is discharged to Lateral K, an agricultural drain – Reclamation District #833 at the point latitude 39N, 24, 28 (deg, min, sec) and

longitude 121W, 43, 32 (deg, min, sec).

### C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Effluent Limitations/Discharge Specifications contained in the existing Order for discharges from Discharge Point D-001 (Monitoring Location M-001)) and representative monitoring data from the term of the previous Order are as follows:

**Table F-2- Summary of Existing Requirements**

Parameter (units)	Effluent Limitation			Monitoring Data (From January 2001 – To May 2006)		
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge <sup>5</sup>	Highest Average Weekly Discharge	Highest Daily Discharge
Chlorine Residual (mg/L)		0.01 <sup>1</sup>	0.02 <sup>2</sup>	<0.01		1.9
Settleable Solids (ml/L)	0.1		0.2	<0.01		<0.01
BOD <sup>3</sup> (mg/L)	30	45	90	13.5		66
Total Suspended Solids (mg/L)	45	60	90	10.0		84.0
Ammonia-N (mg/L)				5.0		27.0
Total Coliform Organisms (MPN/100ml)	23 <sup>4</sup>		500	181.9		5,000
Electrical Conductivity (umhos/cm)	--	--	--	664.0		900.0
Total Dissolved Solids (mg/L)	--	--	--	342.8		530.0
<sup>1</sup> 4 day average <sup>2</sup> 1-hour average <sup>3</sup> 5-day, 20°C biochemical oxygen demand <sup>4</sup> 30-day median <sup>5</sup> Average of all monitoring data points						

2. The Report of Waste Discharge describes the treated municipal wastewater discharge as follows:

**Table F-3 - Summary of Discharge**

Constituent	Result	Units
Design Flow (average dry weather):	0.38	mgd
Annual Average Daily Flow Rate:	0.27	mgd
Peak Wet Weather Flow Rate:	1.05	mgd
BOD <sup>1</sup>	140	mg/L
Total Suspended Solids	120	mg/L
<sup>1</sup> 5-day, 20°C biochemical oxygen demand		

#### **D. Compliance Summary**

On September 9, 2005, the Executive Officer issued an administrative civil liability (ACL) complaint of \$108,000 for effluent violations occurring from January 3, 2000 through June 2004. The ACL was for the assessment of mandatory penalties, pursuant to CWC section 13385. The Discharger has undertaken several actions to address the effluent violations, and has completed the required compliance projects in lieu of a mandatory penalty.

#### **E. Planned Changes**

The Discharger has not submitted any planned changes to the Regional Water Board.

### **III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in the proposed Order are based on the requirements and authorities described in this section. This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

#### **A. Legal Authorities**

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

#### **B. California Environmental Quality Act (CEQA)**

The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section

21000, *et seq.*), requiring preparation of an environmental impact report or negative declaration in accordance with Section 13389 of the California Water Code.

### C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition*, for the *Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan.

The Basin Plan does not specifically identify beneficial uses for *Lateral K (agricultural drain- Reclamation District #833)*. The existing beneficial uses of Lateral K are as follows: *agricultural supply and preservation and enhancement of fish, wildlife and other aquatic resources*. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Resolution No. 88-63 allows an exception for water bodies designed or modified for the primary purpose of conveying or holding agricultural drainage waters. Thus beneficial uses applicable to Lateral K are as follows:

**Table F-4 - Summary of Beneficial Use (s)**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lateral K (agricultural drain – Reclamation District #833)	<u>Existing:</u> agricultural supply, including stock watering (AGR); ; warm freshwater habitat (WARM);, and wildlife habitat (WILD).  <u>Groundwater:</u> Municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PRO), and agricultural supply (AGR).

The Basin Plan on page II-1.00 states: “*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*” and with respect to disposal of wastewaters states that “*...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*”

The federal CWA, Section 101(a)(2), states: “*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and*

*propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.”* Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR §§ 131.2 and 131.10, require that all waters of the State be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR § 131.10, requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

The Regional Water Board has considered the following facts, along with discussions with the Discharger, Reclamation District #833 and the California Department of Water Resources, regarding the existing beneficial uses of Lateral K:

a. Agricultural Supply

Lateral K is a constructed agricultural drain (Reclamation District #833), and therefore, the Regional Water Board is required to apply the beneficial uses of agricultural supply to Lateral K. Water Rights have been issued by the State Water Board to divert water from Butte Creek downstream of the Biggs WWTP discharge for irrigation purposes. Water from Lateral K is also used for crop irrigation through contracts between the Biggs-West Gridley Irrigation District and Reclamation District #833.

b. Preservation and Enhancement of Fish, Wildlife, and Other Aquatic Resources

Lateral K is a constructed agricultural drainage canal in Reclamation District #833. Lateral K can also be used to convey agricultural water from March 1 through October 31 each year, to area farms, through an agreement between the Reclamation District #833 (owner of Lateral K) and the Biggs-West Gridley Water District. During this water conveyance period, there is potential for fish and/or wildlife utilizing the Lateral K drainage canal.

The Regional Water Board also finds that based on the available information and on the Discharger's application, that **Lateral K**, absent the discharge, is an ephemeral agricultural drainage canal. The ephemeral nature of **Lateral K** means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available. Although the discharge, at times, maintains

the aquatic habitat, constituents may not be discharged that may cause harm to aquatic life. At other times, natural flows within **Lateral K** help support the aquatic life. Both conditions may exist within a short time span, where **Lateral K** would be dry without the discharge and periods when sufficient background flows exist. Dry conditions (low water flow in Lateral K) occur primarily in the winter months, but dry conditions may also occur throughout the year, particularly in low rainfall years. The lack of dilution results in more stringent effluent limitations to protect contact recreational uses, drinking water standards, agricultural water quality goals and aquatic life. Significant dilution may occur during and immediately following high rainfall events.

- i. **Thermal Plan. – Not Applicable**
- ii. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
- iii. **State Implementation Policy.** On 2 March 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the California Toxics Rule. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005.
- iv. **Alaska Rule.** On 30 March 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, 27 April 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000, may be used for CWA purposes, whether or not approved by USEPA.
- v. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent



limitations. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the CWA*" pursuant to 40 CFR 131.21(c)(1). [The remaining water quality objectives and beneficial uses implemented by this Order are applicable water quality standards pursuant to 40 CFR 131.21(c)(2).] Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- vi. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

- vii. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order.

- viii. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.
- ix. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a), California Water Code, requires that *"the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective"*.
- x. **Stormwater Requirements.** Not Applicable

#### D. Impaired Water Bodies on CWA 303(d) List

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as *"...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)"* The Basin Plan also states, *"Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment."* Lateral K is not listed in the 303(d) list of impaired water bodies, and is not currently scheduled for a Total Maximum Daily Limit analysis (TMDL).

#### E. Other Plans, Policies, and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on

the following:

- a. The waste consists primarily of domestic sewage and treated effluent;
- b. The waste discharge requirements are consistent with water quality objectives; and
- c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

#### IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR Section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that *“are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.”* Federal Regulations, 40 CFR, §122.44(d)(1)(vi), further provide that *“[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”*

Based on previous CTR sampling, the Regional Water Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an in-stream excursions above applicable water quality standards, and therefore, water quality based effluent limitations for CTR parameters are not included in this Order for pollutants that were not already regulated by Order No. 5-00-255. The Discharger collected three effluent/receiving water samples. One of the samples was collected over 5 years ago, one set of samples did not include an upstream receiving water sample, and therefore only one set of samples were available to determine reasonable potential. The Regional Water Board finds that relying on only one set of samples is not sufficient to determine reasonable potential for the CTR parameters. This Order requires additional sampling and reporting to make this determination. A total of six bi-monthly samples (effluent and receiving water) during the first 12-months after

adoption will be collected and analyzed to determine if there is the reasonable potential of the effluent to cause an in-stream excursions above applicable water quality standards. If there is a reasonable potential, then the Order will be reopened and effluent limits will be assigned to the CTR parameters as applicable.

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00 contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Water Board *"will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives."* This Policy complies with 40 CFR §122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (*i.e.*, water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e.*, the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: *"All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life"* (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs.

#### **A. Discharge Prohibitions**

As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of

a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation. stated in the Federal Standard Provisions (Attachment D), this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Resources Control Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation. The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Secondary treatment has been shown to be effective for pathogen removal.

A wet weather influent wastestream may contain significantly diluted levels of BOD and TSS. A bypassed diluted wastestream may have BOD and TSS levels that meet the secondary or tertiary objectives, either alone or when blended with treated wastewater. However, the bypassed wastestream would not have been treated to reduce pathogens or other individual pollutants. The indicator parameters of BOD and TSS cannot be diluted to a level that may indicate the adequate treatment has occurred as an alternative to providing appropriate treatment.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

40 CFR §133 allows for the adjustment of BOD and TSS limits for facilities that provide treatment equivalent to secondary treatment utilizing stabilization ponds as the principal method of treatment. The Discharger's WWTP uses waste stabilization ponds as the principal treatment process. 40 CFR §133.105(a) and (b) require equivalent to secondary treatment systems to maintain an effluent quality of not more than 45 mg/L as a 30-day average and not more than 65 mg/L as a 7-day average for BOD and TSS. In addition, the 30-day average percent removal (concentration-based) of BOD and TSS is required not to fall below 65 percent. 40 CFR §133.105(c) requires that the pH requirements of 40 CFR §133.102(c) be met (*i.e.*, pH must be maintained between 6.0 and 9.0).

## 2. Applicable Technology-Based Effluent Limitations

The Federal Clean Water Act, Section 301, requires that not later than 1 July 1977, publicly owned wastewater treatment works meet effluent limitations based on secondary treatment or any more stringent limitation necessary to meet water quality standards. Federal Regulations, 40 CFR, Part 133, establish the minimum level of effluent quality attainable by secondary treatment for BOD, TSS, and pH. Biochemical oxygen demand (BOD) is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The solids content—suspended (TSS) and settleable (SS)—is also an important characteristic of wastewater. The secondary treatment standards for BOD and TSS are indicators of the effectiveness of the treatment processes.

### Summary of Technology-based Effluent Limitations Discharge Point D-001

The Clean Water Act and Federal Regulations require that municipal wastewater be treated to “secondary” quality. Federal Regulations, 40 CFR 133, establish the technology-based level of effluent quality achievable through secondary treatment. Discharge Limitations have been established for secondary treatment as 30 mg/L (30-day average) for both BOD and TSS and within the limits of 6.0 and 8.5 for pH. *Federal regulations also establish relaxed “equivalent to secondary” discharge limitations up to 45 mg/L (30-day average) and 65 mg/l (weekly average), based on the technical capability of pond treatment systems.* Final discharge limitations in this Order are based on the technical capability of secondary wastewater treatment systems. Technology based limitations are utilized to assure the treatment systems are properly designed and operated.

**Table F-5 - Summary of Technology-based Effluent Limits**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
5-Day BOD @ 20 °C	mg/L	30	45	90		
	lbs/day <sup>1</sup>	93	138	277		
Total Suspended Solids	mg/L	45	60	90		
	lbs/day <sup>1</sup>	138	184	277		
pH	standard units				6.0	9.0

<sup>1</sup> Based upon a design treatment capacity of 0.38 mgd.

### C. Water Quality-Based Effluent Limitations (WQBELs)

## 1. Scope and Authority

As specified in 40 CFR §122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or water quality criteria contained in the CTR and NTR.

## 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. **Receiving Water**—The receiving stream is Lateral K, an agricultural drainage ditch – Reclamation District #833. The beneficial uses of Lateral K, as described above in Section III.C.1., are as follows:

Table F-6 - Summary of Receiving Water Beneficial Use (s)

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lateral K (agricultural drain- Reclamation District #833	<u>Existing:</u> agricultural supply, including stock watering (AGR); warm freshwater habitat (WARM); and wildlife habitat (WILD).  <u>Groundwater:</u> Municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PRO), and agricultural supply (AGR).

- b. **Site-Specific Objective(s)**— The Basin Plan includes narrative and numeric water quality objectives applicable to Lateral K.
- c. **Hardness**—While no Effluent Limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, Effluent Limitations for certain metals. The *California Toxics Rule*, at (c)(4), states the following:

*“Application of metals criteria. (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/L or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations.” [emphasis added]*

The State Water Resources Control Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: *“We note that...the Regional Water Board...applied a variable hardness value whereby effluent limitations will vary*

*depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than 'floating' effluent limitations."*

Effluent Limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" effluent limitations that are reflective of actual conditions at the time of discharge, Effluent Limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions.

- d. **Assimilative Capacity/Mixing Zone**—Based on the available information, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water. The Discharger did not present a Mixing Zone study for the City of Biggs WWTP.
- e. **Translators**— The water quality objectives for most metals are defined as dissolved metal. Whereas effluent limitations for metals, and most water quality data, are expressed as total metal. Therefore, metal translators are used to convert dissolved metal to total metal or vice versa. There have been no approved studies to evaluate discharge-specific metal translators for the discharge to Lateral K. Therefore, default USEPA translators have been used for reasonable potential analysis and effluent limitation derivation for metals.

### 3. Determining the Need for WQBELs

- a. Reasonable potential (RP) was determined by calculating the projected maximum effluent concentration (MEC) for each constituent and comparing it to applicable water quality criteria; if a criterion was exceeded, the discharge was determined to have reasonable potential to exceed a water quality objective for that constituent. The projected MEC is determined by multiplying the observed MEC (the maximum detected concentration) by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean and standard deviation. For all constituents for which the source of the applicable water quality standard is the CTR or NTR, the multiplying factor is 1. Reasonable potential evaluation was based on the methods used in the SIP and the USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001].



- b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on previous CTR sampling, the Regional Water Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an in-stream excursions above applicable water quality standards, and therefore, water quality based effluent limitations are not included in this Order for pollutants that were not already regulated by Order No. 5-00-255. This Order requires additional sampling to make this determination. Additionally, some of the receiving water analytical data was from downstream of the discharge point, because there was no receiving water upstream from the discharge point at the time of the sampling events. This Order requires additional sampling and reporting to make this determination. A total of six bi-monthly samples (effluent and receiving water) during the first 12-months after adoption will be collected and analyzed to determine if there is the reasonable potential of the effluent to cause an in-stream excursions above applicable water quality standards. This accelerated sampling schedule is required to allow sufficient time to analyze the CTR data and to reopen the permit and set interim and/or final effluent limits that will allow the Facility to come into compliance before 18 May 2010. The 18 May 2010 date in the SIP states that a compliance schedule may not exceed five years from the date that the permit is issued or reissued, nor may it extend beyond ten years from the effective date of the SIP (or 18 May 2010) to establish and comply with CTR criterion-based effluent limitations.
- c. **Ammonia** - Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger does not currently use nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. Applying 40 CFR §122.44(d)(1)(vi)(B), it is appropriate to use USEPA's Ambient National Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia, which was developed to be protective of aquatic organisms.

USEPA's Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life, for total ammonia, recommends acute (1-hour average; criteria maximum concentration) standards based on pH and chronic (30-day average, criteria continuous concentration) standards based on pH and temperature. It also recommends a maximum four-day average concentration of 2.5 times the criteria continuous concentration. USEPA found that as pH increased, both the

acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature. Downstream of Lateral K, Butte Creek has a beneficial use of cold freshwater habitat and the presence of salmonids and early fish life stages is well-documented, the recommended criteria for waters where salmonids and early life stages are present were used. USEPA's recommended criteria are show below:

$$CCC_{30\text{-day}} = \left( \frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) \times \text{MIN}(2.85, 1.45 \cdot 10^{0.028(25 - T)})$$

, and

$$CMC = \left( \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}} \right)$$

where T is in degrees Celsius.

The maximum permitted effluent pH is 9.0. The Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5. The average 30-day receiving water pH is 7.85. The average observed 30-day average effluent temperature was 60.8 °F (16.00 °C), for the 30-day periods ending July 31, 2005. The maximum observed 30-day R-1 temperature was 81.0 °F (27.22 °C), for the 30-day periods ending July 31, 2003. Using a pH value of 7.85 and the temperature values of 60.8 °F (16.00 °C) on a 30-day basis, the resulting effluent limitations are 2.72 mg/L (as N) for the average monthly effluent limitation and 7.44 mg/L (as N) for the average one-hour effluent limitation. Effluent limitations for ammonia are included in this Order to assure the treatment process adequately nitrifies the waste stream to protect the aquatic habitat beneficial uses. The Discharger is unable to comply with the final effluent limitations, therefore, this Order contains interim limits that will be in effect until December 31, 2008 or when the permit is reopened.

A 30-day period is a reasonable representation of a calendar month; so, to conform to 40 CFR §122.45, the 30-day average criteria are set equal to average monthly limitations in this Order.

- d. BOD and TSS**—40 CFR §133.102 contains regulations describing the minimum level of effluent quality—for biochemical oxygen demand (BOD) and total suspended solids (TSS)—attainable by secondary treatment.

The WWTP is required to comply with effluent limitations appropriate for treatment systems providing secondary or equivalent treatment. Effluent limitations for BOD and TSS have been established at 30 and 45 mg/L,

respectively, as a monthly average, which is technically based on the capability of a secondary system. This Order contains a limitation requiring an average of 65 percent removal of BOD and TSS over each calendar month.

- e. **Chlorine**—The Discharger currently uses chlorine for disinfection of the effluent waste stream. Failure of chlorination/dechlorination equipment is a common occurrence in the wastewater industry which has resulted in discharges of toxic levels of chlorine to surface waters. Chlorine can cause toxicity to aquatic organisms when discharged to surface waters. USEPA recommends, in its Ambient Water Quality Criteria for the protection of fresh water aquatic life, maximum 1-hour average and 4-day average chlorine concentrations of 0.019 mg/L and 0.011 mg/L, respectively. The use of chlorine as a disinfectant presents a reasonable potential that it could be discharged in toxic concentrations. Effluent limitations for chlorine have been included in this Order to protect the receiving stream aquatic life beneficial uses. Effluent limitations have been established based on the ambient water quality criteria for chlorine.

The USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring.

Because chlorine is an acutely toxic constituent that can be and will be monitored continuously, an average one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order.

- f. **Dissolved Oxygen (DO)**. The Basin Plan contains a narrative/numeric site-specific water quality objective for areas outside the legal boundaries of the Sacramento Delta. For surface water bodies outside the legal boundaries of the Delta, the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation. The dissolved oxygen concentrations shall not be reduced below the following minimum, levels at any time: Waters designated as WARM – 5.0 mg/L. The discharge has a reasonable potential to cause, or contribute, to an in-stream excursion of the DO water quality objective. Water quality-based effluent limitations for DO have been included in this Order based on the Basin Plan's water quality objective for DO.
- g. **Electrical Conductivity**—Water Rights have been issued by the State Water Board to divert water from Butte Creek downstream of the Biggs WWTP discharge for irrigation purposes. Water from Butte Creek is used for crop irrigation. Based on the last three years of sample data, for electrical

conductivity, the maximum effluent concentration was 900 umhos/cm and the average discharge concentration was 706 umhos/cm. Based on the sample data, the wastewater discharge regularly causes significant increases in the electrical conductivity concentration (umhos/cm) within the receiving stream, Lateral K, as follows:

**Table F-7- Summary of Electrical Conductivity Sample Results**

Month	Average Upstream electrical conductivity	Average Downstream electrical conductivity	Average Effluent Discharge	Increase from Upstream to Downstream
Jan	370	417	643	47
Feb	282	430	700	148
Mar	296	355	635	59
Apr	221	465	700	244
May	326	375	679	49
June	329	370	772	41
July	347	386	764	38
Aug	124	154	845	30
Sep	179	220	713	41
Oct	202	224	679	22
Nov	436	557	621	121
Dec	190	245	735	55

The Basin Plan's "Policy for Application of Water Quality Objectives" provides that in implementing narrative water quality objectives, the Regional Water Board will consider numerical criteria and guidelines developed by other agencies and organizations. This application of the Basin Plan is consistent with Federal Regulations, 40 CFR 122.44(d).

For electrical conductivity, Ayers R.S. and D.W. Westcott, *Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985)*, reports levels above 700 umhos/cm will reduce crop yield for sensitive plants. The University of California, Davis Campus, Agricultural Extension Service, published a paper, dated 7 January 1974, stating that there will not be problems to crops associated with salt if the electrical conductivity remains below 750 umhos/cm. Based on discussions with the University of California, Davis, Farm Advisor (UCDFA) the soil in the vicinity of the Biggs WWTP is a very heavy gray-black clay adobe that has poor internal drainage making it generally unsuitable for almost all crops other than rice. Based on comments from the UCDFA, these salt sensitive crops cannot be grown in the Biggs area. The 900 umhos/cm final effluent limitation is based on the agricultural beneficial for rice

propagation.

The receiving water (Lateral K), absent the Biggs WWTP wastewater, is generally acceptable for irrigation based on electrical conductivity values. The wastewater discharge increases concentrations of electrical conductivity from a range of 22 to 244 (umhos/cm). The wastewater has not increased the downstream electrical conductivity to be in violation of the Chemical Constituent Water Quality Objective in the Basin Plan, however, there is the potential for exceedences. The available literature regarding safe levels of electrical conductivity for irrigated agriculture were considered in requiring that an effluent limitation for electrical conductivity is necessary to protect the beneficial use of the receiving stream in accordance with the Basin Plan and Federal Regulations. Therefore, this Order includes an effluent limitation of 900 umhos/cm for electrical conductivity based on the agricultural beneficial use. The effluent limitation has been established as a 30-day average.

- h. Flow**—The Biggs WWTP was designed to provide a secondary treatment level of treatment for up to its design flow of **0.38** mgd. The effluent flow limit is therefore set at **0.38** mgd.
- i. Pathogens**—Agricultural irrigation is a beneficial use of the receiving stream (**Lateral K**). Coliform limits are imposed to protect the beneficial uses of the receiving water. In a July 1, 2003 letter from DHS to Thomas Pinkos, former Executive Officer, DHS stated “Waters that receive secondary, 23-MPN effluents should not be used for rice irrigation unless the DR [dilution ratio] exceeds 20:1 due to a potential for enhanced mosquito breeding in waters that include significant amounts of such effluents. Regional Board staff was concerned of the high coliform in the receiving water upstream from the discharge point, and conducted a sampling event (September 2006) to determine the actual coliform levels in the Lateral K agricultural ditch. Based on 12 surface water samples taken from the Biggs WWTP and proceeding upstream approximately 5 miles (to the beginning of the Lateral K ditch), the upstream water quality all exceeded 2,419 MPN/100 mL (detection limit of test) for total coliform. Also, the average monthly coliform in the upstream receiving water for the past six years was 5,704 MPN/100 mL (minimum of 4 MPN/100 mL and maximum of 160,000 MPN/100 mL). Based on best professional judgment (BPJ), setting a limitation of 2.2 MPN/100 mL on the discharge instead of the current 23 MPN/100 mL, will have no observable effect on the receiving water quality. Therefore, the 23 MPN/100 mL limitation is found to be appropriate.
- j. pH**—The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the “...pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in

fresh waters with designated COLD or WARM beneficial uses.” Effluent limitations for pH are included in this Order and are protective of the Basin Plan objectives for pH. The WWTP is required to comply with effluent limitations appropriate for treatment systems providing secondary or equivalent treatment. Federal technology based standards for secondary treatment requires effluent limitations for pH to be 6.0 to 9.0. The Basin Plan allows for averaging periods to determine compliance with the water quality objective of 6.5 to 8.5. Effluent limitations for pH have been established at 6.0 to 9.0, as an instantaneous minimum and maximum, which is technically based on the capability of a secondary system.

- k. **Salinity.** The discharge contains total dissolved solids (TDS) and electrical conductivity. These are water quality parameters that are indicative of the salinity of the water. Their presence in water can be growth limiting to certain agricultural crops and can affect the taste of water for human consumption. There are no USEPA water quality criteria for the protection of aquatic organisms for these constituents. The Basin Plan contains a chemical constituent objective that incorporates State MCLs, contains a narrative objective, and contains numeric water quality objectives for electrical conductivity . (See Table F-8).

**Table F-8 - Salinity Water Quality Criteria/Objectives**

Parameter	Agricultural WQ Goal <sup>1</sup>	Secondary MCL <sup>3</sup>	Effluent	
			Avg	Max
Electrical Conductivity (umhos/cm)	900 <sup>2</sup>	900, 1600, 2200	706	900
<sup>1</sup> Agricultural water quality goals based on <i>Water Quality for Agriculture</i> , Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985)				
<sup>2</sup> Agricultural water quality goals listed provide no restrictions on crop type or irrigation methods for maximum crop yield. Higher concentrations may require special irrigation methods to maintain crop yields or may restrict types of crops grown.				
<sup>3</sup> The secondary MCLs are stated as a recommended level, upper level, and a short-term maximum level.				

#### 4. WQBEL Calculations

- a. The City of Biggs Wastewater Treatment Plant conducted monitoring for priority and non-priority pollutants. The analytical results were submitted to the Regional Water Board. The results of these sampling events were used in

developing this Order. All detectable results from these analyses are summarized in Table **F-9** (below). Effluent limitations are included in the Order to protect the beneficial uses of the receiving stream and to ensure that the discharge complies with the Basin Plan objective that toxic substances not be discharged in toxic amounts. Unless otherwise noted, all mass limitations in this Order were calculated by multiplying the concentration limitation by the design flow and the appropriate unit conversion factors. Results from priority pollutants are not included because the data is not sufficient to determine if a reasonable potential exists. This Order requires additional priority pollutant sampling before effluent limits are assessed for the priority pollutants.

Table F-9 - Summary of Reasonable Potential Analysis

Parameter	Units	MEC	BC	Most Stringent Applicable Criterion (CTR)	CMC	CCC	MCL	Basin Plan	Basis for Reasonable Potential Determination	AMEL	MDEL
<b>NON-CTR Pollutants</b>											
Ammonia	mg/L	27	6.50	2.72 <sup>1</sup>	--	--	--	--	MEC > BC	2.72	7.44
Fecal Coliform	MPN/100 mL	4,900	71,600	200 <sup>2</sup>	--	--	--	200	MEC, BC > BP	200	400
Dissolved Oxygen (Receiving water)	mg/L	NA	2.8 <sup>3</sup>	> 5 <sup>2</sup>	--	--	--	> 5	BC < BP	> 5	> 5
Electrical Conductivity	umhos/cm	900	732	900 <sup>4</sup>				--	MEC > CTR	900	--
<sup>1</sup> Results are calculated from USEPA's 2003 Update of Ambient Water Quality Criteria for Ammonia <sup>2</sup> Based on Basin Plan Water Quality Objectives for secondary treatment <sup>3</sup> Minimum dissolved oxygen reading <sup>4</sup> Secondary MCL for ECMEC = maximum effluent concentration CTR = California Toxic Rule CCC = Criterion Continuous Concentration (chronic) AMEL = Average monthly effluent limit BC = maximum background concentration (receiving water) CMC = Criterion Maximum Concentration (acute) MCL = Drinking Water Standards Maximum Contaminant Levels MDEL = Maximum daily effluent limit											



### Non-CTR Pollutants

The procedures in the SIP for determining reasonable potential and calculating WQBELs specifically apply only to priority pollutant criteria promulgated through the NTR and CTR and to priority pollutant objectives established by Regional Water Boards in their Basin Plans. For other constituents, the Regional Water Board must determine what procedures it will use to evaluate reasonable potential and calculate effluent limitations. In order to maintain consistency in methodology for permitting discharges of various constituents, the Regional Water Board proposes to use the same procedures required by the SIP for CTR constituents to evaluate reasonable potential and, where necessary, develop WQBELs for non-CTR constituents.

- b. Effluent limitations for water quality-based limitations were calculated in accordance with Section 1.4 of the SIP and the TSD (only for interim limitations). The following paragraphs describe the general methodology used for calculating effluent limitations.
- c. **Calculations for Dilution Ratios – Not Applicable**
- d. **Calculations for Effluent Limitations** In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \quad ECA_{chronic} = CCC \quad ECA_{HH} = HH + D_{HH} (HH - B_{HH})$$

where:

- $ECA_{acute}$  = effluent concentration allowance for acute (one-hour average) toxicity criterion
- $ECA_{chronic}$  = effluent concentration allowance for chronic (four-day average) toxicity criterion
- $ECA_{HH}$  = effluent concentration allowance for human health, agriculture, or other long-term criterion/objective
- $CMC$  = criteria maximum concentration (one-hour average)
- $CCC$  = criteria continuous concentration (four-day average, unless otherwise noted)
- $D_{HH}$  = dilution ratio for human health, agriculture, or other long-term criterion/objective
- $HH$  = human health, agriculture, or other long-term

$B_{HH}$  = criterion/objective background concentration for human health. (for carcinogens: arithmetic mean of R-1 concentrations, for non-carcinogens: observed maximum R-1 concentration; or lowest detection level if all results are non-detect)

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL). The statistical multipliers were calculated using data shown in Table F-1.

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$AMEL = mult_{AMEL} \left[ \min \left( \overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic} \right) \right]$$

$$MDEL = mult_{MDEL} \left[ \min \left( M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}} \right) \right]$$

$$MDEL_{HH} = \left( \frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH}$$

**where:**  $mult_{AMEL}$  = statistical multiplier converting minimum LTA to AMEL  
 $mult_{MDEL}$  = statistical multiplier converting minimum LTA to MDEL  
 $M_A$  = statistical multiplier converting CMC to LTA  
 $M_C$  = statistical multiplier converting CCC to LTA

- e. **Use of Assimilative Capacity.** The Discharger did not request the use of more assimilative capacity than is needed for its discharge to comply. For some constituents, more assimilative capacity is available than is needed for compliance. Therefore, in calculating effluent limitations, the calculated  $ECA_{HH}$  was compared to a projected MEC. The projected MEC is determined by multiplying the observed MEC by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean. The default coefficient of variation for constituents with fewer than ten samples and/or for which 80% or more of the sample results were non-detect is 0.6. Projected MEC calculations were based on projection methods contained in the USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] and are

summarized below.

$$p_n = (1 - \text{confidence level})^{1/n} \quad C_{99} = (2.326\sigma - 0.5\sigma^2) \quad C_p = (z\sigma - 0.5\sigma^2)$$

where:

- $p_n$  = percentile represented by the highest concentration in the available data
- $n$  = number of available samples
- $C_{99}$  = numerator for projection factor
- $C_p$  = denominator for projection factor
- $\sigma^2$  =  $\ln(CV^2 + 1)$
- $CV$  = coefficient of variation; calculated as the standard deviation divided by the mean
- $z$  = normal distribution value for  $p_n$  percentile
- 2.326 = normal distribution value for 99th percentile

The projected MEC is equal to the observed MEC multiplied by  $\frac{C_{99}}{C_{p_n}}$ . Where

the projected MEC was less than the  $ECA_{HH}$ , the projected MEC was set equal to the AMEL and the MDEL, where appropriate, was calculated as described in WQBEL Calculations VIII.E.4.d.

- f. **Mass-based Effluent Limitations.** Title 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow allowed in the Limitations and Discharge Requirements.

**Averaging Periods for Effluent Limitations.** Title 40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, the US EPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. *"First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for*

*assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed.*" (TSD, pg. 96) This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for ammonia as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream.

## 5. Whole Effluent Toxicity (WET)

The Basin Plan states that "[a]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances." The Basin Plan requires that "[a]s a minimum, compliance with this objective...shall be evaluated with a 96-hour bioassay." This Order requires both acute and chronic toxicity monitoring to evaluate compliance with this water quality objective.

- a. **Acute Toxicity:** The Basin Plan further states that "...effluent limits based upon acute biotoxicity tests of effluents will be prescribed...". Effluent limitations for acute toxicity are included in this Order. This Order includes the following limitation for acute toxicity:

Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay - - - - - 70%

Median for any three or more consecutive bioassays - - - - 90%

- b. **Chronic Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00.) Based on quarterly whole effluent chronic toxicity testing performed by the Discharger from October 23, 2001 through July 13, 2004, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

No dilution has been granted for the chronic condition. Therefore, chronic toxicity testing results exceeding 1 chronic toxicity unit (TUc) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance

of the Basin Plan's narrative toxicity objective. Table F-10 contains a summary of a Chronic Aquatic Toxicity test conducted in June of 2002.

Numeric chronic WET effluent limitations have not been included in this order. However, to ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, Special Provisions VI.C.2.a of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE work plan. The numeric toxicity monitoring trigger is not an effluent limitation, it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as, the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

**Table F-10 - Whole Effluent Chronic Toxicity Testing Results**

	Fathead Minnow		Water Flea		Green Alga
	<i>Pimephales promelas</i>		<i>Ceriodaphnia dubia</i>		<i>Selenastrum capricornutum</i>
Date	Survival (TUc)	Growth (TUc)	Survival (TUc)	Reproduction (TUc)	Growth (TUc)
06/10/2002	<1	1.33	<1	1.33	<1

#### D. Final Effluent Limitations

1. 40 CFR §122.45 states that:

- a. "In the case of POTWs, permit effluent limitations...shall be calculated based on design flow."
- b. "For continuous discharges all permit effluent limitations...shall unless impracticable be stated as...[a]verage weekly and average monthly discharge limitations for POTWs."
- c. "All pollutants limited in permits shall have limitations...expressed in terms of mass except...[f]or pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass...Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations."

Table F-11 contains a summary of the Final Effluent Limitations for the Discharge Point.

**Table F-11 - Summary of Final Effluent Limitations - Discharge Point D-001**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Average Dry Weather Flow	mgd	0.38	--		--	--
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	30	45	90	--	--
	lbs/day <sup>1</sup>	95	143	285	--	--
Total Suspended Solids	mg/L	45	60	90	--	--
	lbs/day <sup>1</sup>	143	190	285	--	--
pH	standard units	--	--	--	6.0	9.0
Ammonia, Total (as N)	mg/L	2.72	--	7.44	--	--
Electrical Conductivity (25° C)	umhos/cm	900				
<sup>1</sup> Based on a design treatment capacity of 0.38 mgd						

#### E. Interim Effluent Limitations

As stated in the above Findings, the USEPA adopted the NTR and the CTR, which contains water quality standards applicable to this discharge and the SIP contains guidance on implementation of the NTR and CTR. The SIP, Section 2.2.1, requires that if a compliance schedule is granted for a CTR or NTR constituent, the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. The interim limitations must: be based on current treatment plant performance or existing permit limitations, whichever is more stringent; include interim compliance dates separated by no more than one year; and be included in the Provisions. Interim limitations for constituents with CTR/NTR-based final effluent limitations in this Order are based on the current treatment plant performance. *Interim limitations for technology-based effluent limitations are based on permit limitations carried forward from the previous Order.*

In this case, the long-term objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed sampling point to obtain the daily maximum interim limitation (*Technical Support*

*Document for Water Quality- Based Toxics Control ((EPA/505/2-90-001), TSD , Table 5-2).* The Regional Water Board finds that the Discharger can undertake source control and treatment plant measures to maintain compliance with the interim limitations included in this Order. . Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. For example, USEPA states in the Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life for copper, that it will take an unstressed system approximately three years to recover from a pollutant in which exposure to copper exceeds the recommended criterion. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the Effluent Limitation can be achieved.

In developing the interim limitation, where there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists*, Kennedy and Neville, Harper and Row). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data. Where actual sampling shows an exceedance of the proposed 3.3-standard deviation interim limit, the maximum detected concentration has been established as the interim limitation. When there are less than ten sampling data points available, the *Technical Support Document for Water Quality Based Toxics Control ((EPA/505/2-90-001), TSD)* recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective.

**Table F-12 - Interim Effluent Limitation Calculation Summary**

Parameter	MEC	Mean	Std. Dev.	# of Samples	Calculated Interim Limitation	Interim Limitation
Ammonia, total <sup>1</sup>	27	5.1	4.7	55	20.61	27
<sup>1</sup> Units are mg/L						

**F. Land Discharge Specifications**

1. The discharge of waste classified as “hazardous” as defined in section 2521(a) of Title 23, California Code of Regulations (CCR), or “designated”, as defined in section 13173 of the CWC, to the treatment ponds is prohibited.
2. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas (or property owned by the Discharger).
3. As a means of discerning compliance with Land Discharge Specification 2, the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.
4. Ponds shall not have a pH less than 6.0 or greater than 9.0.
5. The wastewater ponds shall be managed to prevent breeding of mosquitoes. In particular:
  - a. Weeds shall be minimized;
  - b. Dead algae, vegetation, and debris shall not accumulate on the water surface.
6. Public contact with the wastewater shall be precluded through such means as fences, signs, or other acceptable alternatives.
7. The wastewater ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the non-irrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).



## G. Reclamation Specifications - Not Applicable

### 1. Disinfection Standard – Not Applicable

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

### A. Surface Water

1. The CWA, Section 303(a-c), required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Water Board adopted numeric criteria in the Basin Plan. The Basin Plan sets forth water quality standards to implement the state and federal requirements for water quality control (40 CFR §131.20), including beneficial uses and numeric and narrative water quality objectives. State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.” This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity and turbidity.

2. **Ammonia**—The Basin Plan states that, “[w]aters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia ( $\text{NH}_3$ ) to exceed 0.025 mg/l (as N) in receiving waters.”
3. **Dissolved Oxygen**—The Lateral K has been designated as having the beneficial use of warm freshwater aquatic habitat (WARM) and warm freshwater. For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that “...the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation.” This objective was included as a receiving water limitation in this Order.
- 4.
5. **pH**—For all surface water bodies in the Sacramento River and San Joaquin River basins (except for Goose Lake), the Basin Plan includes water quality objectives stating that “[t]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.” This Order includes receiving water limitations for both pH range and pH change.

The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.5 range, an averaging period is considered.

6. **Temperature**—Lateral K has the beneficial use WARM. The Basin Plan includes the objective that “[a]t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature.” This Order includes a receiving water limitation based on this objective.
7. **Turbidity**—The Basin Plan includes the following objective: “Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:
  - Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
  - Where natural turbidity is between 5 and 10 NTUs, increases shall not exceed 20 percent.
  - Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTU.

- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.”

## **B. Groundwater**

1. The beneficial uses of the underlying ground water, as identified in the Basin Plan, are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
2. Basin Plan water quality objectives to protect the beneficial uses of groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity of groundwater, and taste and odor. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The Basin Plan requires the application of the most stringent objective necessary to ensure that groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect municipal and domestic water supply, agricultural supply, or any other beneficial use.
3. State Water Resources Control Board (State Water Board) Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board in regulating discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that the discharge be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.
4. The Discharger utilizes aeration lagoons, a ballast pond, and three plug flow rock filters. Domestic wastewater contains constituents such as total dissolved solids (TDS), electrical conductivity, pathogens, nitrates, organics, metals and oxygen demanding substances (BOD). Percolation from the lagoons, ponds and rock filters may result in an increase in the concentration of these constituents in groundwater. The increase in the concentration of these constituents in groundwater must be consistent with Resolution 68-16. Any increase in pollutant

concentrations in groundwater must be shown to be necessary to allow wastewater utility service necessary to accommodate housing and economic expansion in the area and must be consistent with maximum benefit to the people of the State of California. Some degradation of groundwater by the Discharger is consistent with Resolution 68-16 provided that:

- a. the degradation is limited in extent;
- b. the degradation after effective source control, treatment, and control is limited to waste constituents typically encountered in municipal wastewater as specified in the groundwater limitations in this Order;
- c. the Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control (BPTC) measures; and
- d. the degradation does not result in water quality less than that prescribed in the Basin Plan.

## **VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

### **A. Influent Monitoring**

- a. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (*i.e.*, BOD and TSS reduction requirements).

**Table F-13 - Summary of Influent Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
5-Day BOD	mg/L, lbs/day	24-hr. Composite <sup>1</sup>	Weekly	
Total Suspended Solids	mg/L, lbs/day	24-hr. Composite <sup>1</sup>	Weekly	
Priority Pollutants	ug/L	24-hr. Composite <sup>1</sup>	Annually	
Flow	mgd	Meter	Continuous	
<sup>1</sup> 24-hour flow proportioned composite				

**B. Effluent Monitoring**

1. The SIP states that if “...all reported detection limits of the pollutant in the effluent are greater than or equal to the C [water quality criterion or objective] value, the RWQCB [Regional Water Board] shall establish interim requirements...that require additional monitoring for the pollutant....” All reported detection limits for ammonia are greater than or equal to corresponding applicable water quality criteria or objectives. Monitoring for this constituent has been included in this Order in accordance with the SIP.
2. Pursuant to the requirements of 40 CFR §122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

**Table F-14 - Summary of Effluent Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	
Total Residual Chlorine <sup>1</sup>	mg/L, lbs/day	Meter	Continuous	
pH	standard units	Meter	Weekly	
BOD 5-day 20°C	mg/L, lbs/day	24-hr. Composite <sup>2</sup>	Weekly	
Total Suspended Solids	mg/L, lbs/day	24-hr Composite <sup>2</sup>	Weekly	
Ammonia, Total (as N) <sup>3, 4</sup>	mg/L	Grab	Weekly	
Nitrate (as N)	mg/L	Grab	Semi-monthly	
Total Coliform Organisms	MPN/100 mL	Grab	Weekly	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Weekly	
Temperature <sup>5</sup>	°F	Grab	Monthly	
Priority Pollutants <sup>6, 7</sup>	ug/L	Grab	Annually <sup>8</sup>	

<sup>1</sup> Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.

<sup>2</sup> 24-hour flow proportioned composite

<sup>3</sup> Concurrent with biotoxicity monitoring

<sup>4</sup> Report as both Total and Un-ionized ammonia with corresponding pH and temperature measurement

<sup>5</sup> Effluent Temperature monitoring shall be at the Outfall location

<sup>6</sup> Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (known as the State Implementation Plan or SIP).

<sup>7</sup> Concurrent with receiving surface water sampling

<sup>8</sup> Full Priority Pollutant sampling should occur on a bi-monthly frequency for a one-year period following Order adoption.

**C. Whole Effluent Toxicity Testing Requirements**

The Basin Plan states that “[a]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.” The Basin Plan requires that “[a]s a minimum, compliance with this objective...shall be evaluated with a 96-hour bioassay.” This Order requires both

acute and chronic toxicity monitoring to evaluate compliance with this water quality objective.

The receiving surface water for the City of Biggs WWTP is the Lateral K, an inland surface water providing freshwater aquatic habitat. Beneficial uses of the Lateral K include *agricultural supply; and preservation and enhancement of fish, wildlife and other aquatic resources*. Given that the receiving stream has beneficial uses of warm freshwater habitat, , it is appropriate to use a warm-water species such as fathead minnows (*Pimephales promelas*) for aquatic toxicity bioassays.

USEPA has approved test methods for of *Pimephales promelas*, *Selenastrum capricornutum*, and *Ceriodaphnia dubia* for assessing chronic toxicity in freshwater organisms.

#### **D. Receiving Water Monitoring**

##### **1. Surface Water**

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

**Table F-15 - Summary of Surface Water - Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Number	Grab	Weekly	<sup>1</sup>
Turbidity	NTU	Grab	Monthly	<sup>1</sup>
Dissolved Oxygen	mg/L	Grab	Monthly	<sup>1</sup>
Temperature	°F	Grab	Weekly	<sup>1</sup>
Fecal Coliform Organisms	MPN/100 mL	Grab	Monthly	
Electrical Conductivity	umhos/cm	Grab	Monthly	<sup>1</sup>
Ammonia, Total (as N) <sup>2</sup>	mg/L	Grab	Monthly	
Nitrate	mg/L	Grab	Monthly	
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	Quarterly	
Priority Pollutants <sup>3</sup>	ug/L	Grab	Annually <sup>4</sup>	
Flow	gpd	Grab	Weekly	

<sup>1</sup> A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the WWTP

<sup>2</sup> Temperature and pH shall be determined at the time of sample collection

<sup>3</sup> Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (known as the State Implementation Plan).

<sup>4</sup> Full Priority Pollutant sampling should occur on a bi-monthly frequency for a one-year period following Order adoption.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by Stations R-001 and R-002. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter
- b. Discoloration
- c. Bottom deposits
- d. Aquatic life
- e. Visible films, sheens or coatings
- f. Fungi, slimes, or objectionable growths
- g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring report.



## 2. Groundwater – Not Applicable

### E. Other Monitoring Requirements

#### 1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements (Special Provisions VI.C.6.a.). Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

#### 2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of constituents in the wastewater.

**Table F-16 - Summary of Water Supply Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Electrical Conductivity <sup>1</sup>	umhos/cm	Grab	Annually	
Standard Minerals <sup>2</sup>	mg/L	Grab	Annually	
<sup>1</sup> If the water supply is from more than one source, the electrical conductivity shall be reported as a weighted average and include copies of supporting calculations.  <sup>2</sup> Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).				

#### 3. Pond Monitoring

Pond/lagoon monitoring shall be conducted when water is present in the pond(s)/lagoon(s). All pond/lagoon samples shall be grab samples. The Discharger shall monitor all **Pond(s)**, at a minimum as follows:

**Table F-17 - Summary of Pond Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	Feet <sup>1</sup>	Grab	Weekly	
Dissolved Oxygen	mg/L	Grab	Weekly	
General conditions of dikes around ponds	Visual	NA	Weekly	
1. Freeboard shall be monitored to the nearest tenth of a foot.				

**4. Annual Pretreatment Reporting Requirements – Not Applicable.****VII. RATIONALE FOR PROVISIONS****A. Standard Provisions**

Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

Title 40 CFR Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR Section 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with Section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR Sections 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

**B. Special Provisions****1. Reopener Provisions**

Upon adoption of any applicable water quality standard for receiving waters by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted thereunder, this permit may be reopened and receiving water limitations added. Additionally, based on the results of the CTR and non-CTR sampling, this Order may be reopened so that effluent limits can be placed on constituents that have a reasonable potential to cause or contribute to an in-stream excursion above a narrative or numerical water quality standard.

## 2. Special Studies and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** The Discharger shall conduct the chronic toxicity testing specified in the Monitoring and Reporting Program. If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the narrative water quality objective for toxicity, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) to identify the causes of toxicity. Upon completion of the TIE, the Discharger shall submit a workplan to conduct a Toxicity Reduction Evaluation (TRE) and, after Regional Water Board evaluation, conduct the TRE. This Order may be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.

- F. **Permeability Study.** The Discharger shall complete a permeability study within the area potentially affected by the WWTP (in accordance with the following table). The investigation should include a technical report documenting the existing in-place clay permeability of the subsurface beneath the unlined ponds and rock filters. The clay permeability tests can be a combination of in-place (BAT™ tests) and laboratory permeability tests. Laboratory permeability testing shall be in accordance with American Society of Testing and Materials (ASTM) D 5084. For ASTM D 5084, undisturbed thin-wall tube samples should be collected (per ASTM D 1587) near the BAT™ test locations (if taken). Sample tubes should be labeled and transferred to the soils laboratory according to ASTM D 4220, Group C. Permeability results for the in-place samples shall be submitted in a technical report.

The technical report shall evaluate the permeability results with respect to each component (i.e. storage ponds, sludge drying bed, rock filters, ballast pond), and discuss the WWTP impact on groundwater quality. Where there is a possibility of the wastewater impacting the groundwater, due to high permeability rates, the technical report shall provide recommendations for necessary modifications (e.g., construct liners, WWTP component upgrade and retrofit) to achieve BPTC. Based on the results of the permeability study, this Order may be reopened and groundwater limitations added.

**Table F-18 - Permeability Investigation**

<b>Task</b>	<b>Compliance Date</b>
1 - Submit Workplan for permeability investigation	Within 6 months of Adoption Date of Order
2 - Sample in-place permeability adjacent to ponds and rock filters	Within 3 months of Regional Water Board approval
3 - Submit a technical report on permeability results, characterizing natural background permeability	Within 3 months of completion of Task 2

**G. Best Practicable Treatment or Control (BPTC).** The Discharger shall submit to the Regional Water Board for approval by the Executive Officer, a work plan, including a time schedule for a comprehensive technical evaluation of the Facility's waste treatment and control, to determine BPTC of its discharge to Lateral K, to meet the requirements of State Water Board Resolution 68-16. The technical report describing the work plan and schedule shall contain a preliminary evaluation and propose a time schedule for completing the comprehensive technical evaluation. To comply with Resolution 68-16, the treatment or control of discharges of waste to waters of the state must be sufficient to provide the minimum degradation of such waters that is feasible, but in no case can the discharge cause the exceedance of applicable water quality objectives.

Following completion of the evaluation, the Discharger shall submit to the Regional Water Board a technical report describing the evaluation's results and critiquing the treatment facility with respect to BPTC. Where deficiencies are documented, the technical report shall provide recommendations for necessary modifications (e.g., new or revised salinity source control measures, facility component upgrade and retrofit) to achieve BPTC and identify the source(s) of funding and proposed schedule for modifications. The schedule shall be as short as practicable. The technical report shall include specific methods the Discharger proposes as a means to measure processes and assure continuous optimal performance of BPTC measures. The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

Table F19 – BPTC Study

Task	Compliance Date
1 - Submit technical report: work plan and schedule for comprehensive evaluation	Within 6 months of Adoption date of Order
2 - Commence comprehensive evaluation	Within 3 months of Regional Board approval of Technical Report
3 - Complete comprehensive evaluation	As established by Task 1 and/or 2 years following Task 2, whichever is sooner
4 - Submit technical report: comprehensive evaluation results	60 days following completion of Task 3.
5 - Submit annual report describing the overall status of BPTC implementation over the past reporting year	To be submitted in accordance with the MRP

**H. Chronic Whole Effluent Toxicity Requirements (Special Provisions VI.C.2.a.).**

The Basin Plan contains a narrative toxicity objective that states, “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*” (Basin Plan at III-8.00.) Based on quarterly whole effluent chronic toxicity testing performed by the Discharger from August 14, 2001 through July 12, 2004, the discharge has reasonable potential to cause or contribute to an to an in-stream excursion above of the Basin Plan’s narrative toxicity objective.

Special Provisions VI.C.2.a requires the Discharger to develop a Toxicity Reduction Evaluation (TRE) Work Plan in accordance with EPA guidance. In addition, the provision provides a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity has been demonstrated.

**Monitoring Trigger.** A numeric toxicity monitoring trigger of  $>1$  TUc (where  $TUc = 100/NOEC$ ) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

**Accelerated Monitoring.** The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of

accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests every two weeks using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991* (TSD). The TSD at page 118 states, "EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required." Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e. toxicity present exceeding the monitoring trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

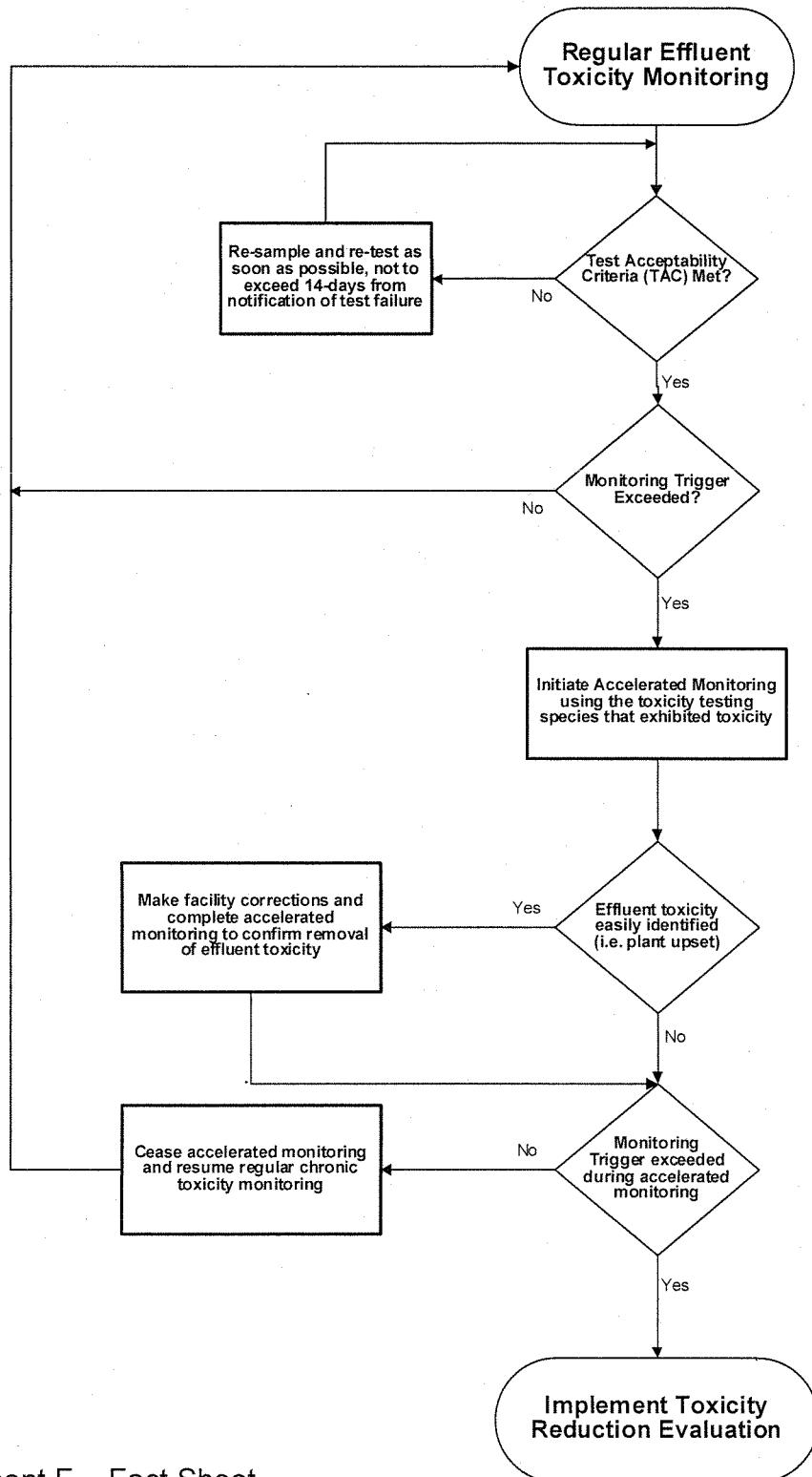
See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

**TRE Guidance.** The Discharger is required to prepare a TRE Work Plan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, (EPA/833B-99/002), August 1999.*
- *Generalized Methodology for Conducting Industrial TREs, (EPA/600/2-88/070), April 1989.*
- *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600/6-91/005F, February 1991.*
- *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, EPA 600/6-91/005F, May 1992.*
- *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity, Second Edition, EPA 600/R-92/080, September 1993.*

- *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/081, September 1993.
- *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, EPA-821-R-02-012, October 2002.
- *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-R-02-013, October 2002.
- *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991

Figure F-1  
WET Accelerated Monitoring Flow Chart





## 2. Best Management Practices and Pollution Prevention

- a. **Pollution Prevention Plan for Salinity.** The Discharger shall prepare a pollution prevention plan for salinity in accordance with CWC section 13263.3(d)(3) to reduce the salinity of its discharge. A work plan and time schedule for preparation of the pollution prevention plan shall be completed and submitted to the Regional Water Board **within 6 months of the effective date of this Order** for approval by the Executive Officer. The Pollution Prevention Plan shall be completed and submitted to the Regional Water Board **within two (2) years following work plan approval by the Executive Officer**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program.
- b. **Salinity Reduction Goal.** The Discharger shall provide to the Regional Water Board annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to Lateral K. The annual reports shall be submitted in accordance with the Monitoring and Reporting Program.
- c. **CWC section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required for salinity shall, at minimum, meet the requirements outlined in CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plans included the following:
  - i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.
  - ii. An analysis of the methods that could be used to prevent the discharge of the pollutants into the Facility, including application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.
  - iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.
  - iv. A plan for monitoring the results of the pollution prevention program.
  - v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.

- vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.
- vii. A description of the Discharger's existing pollution prevention programs.
- viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.
- ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

### 3. Construction, Operation, and Maintenance Specifications

- a. Ponds shall be managed to prevent breeding of mosquitoes. In particular,
  - i. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface;
  - ii. Weeds shall be minimized; and
  - iii. Dead algae, vegetation, and debris shall not accumulate on the water surface.
- b. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- c. Ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the nonirrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).
- d. Prior to the onset of the rainy season of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification VI.C.4.c.
- e. The treatment and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
- f. This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed **within six months of adoption** of this permit. For systems installed following permit adoption, the notification system shall be installed simultaneously.

### 4. Special Provisions for Municipal Facilities (POTWs Only)

**a. Pretreatment Requirements**

- i. The Federal Clean Water Act, Section 307(b), and Federal Regulations, 40 CFR Part 403, require publicly owned treatment works to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards or permit limitations. Pretreatment requirements are imposed pursuant to 40 CFR Part 403.
- ii. The Discharger shall implement and enforce its approved pretreatment program and is an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the Central Valley Water Board, the State Water Board or the U.S. EPA may take enforcement actions against the Discharger as authorized by the CWA.

**b. Sanitary Sewer Overflow Requirements**

- i. On May 2, 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order 2006-0003 and any future revisions thereto. Order 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR

**5. Other Special Provisions**

- g. This Order requires the Discharger to use the best practicable treatment or control technique currently available to limit mineralization to no more than a reasonable increment.
- h. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

- i. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, this Order requires the Discharger to notify the Regional Water Board by telephone (916) 464-3291 (or to the Regional Water Board staff engineer assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [40 CFR §122.41(l)(6)(i)].
- j. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in the Federal Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, *etc.*) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.
- k. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger must obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

## 6. Compliance Schedules

The use and location of compliance schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria.

- a. For non-CTR-based Effluent Limitations, the necessary time schedules were generally included in the NPDES permit.
- b. The SIP, at Section 2.1, states that "[b]ased on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit."

The SIP further states that "[t]he discharger shall submit to the RWQCB the following justification before compliance schedules may be authorized in a permit: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposed schedule for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable."

## VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the City of Biggs Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

### A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through mailings and physical and internet posting.

### B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in

person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on April 5, 2007.

**C. Public Hearing**

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **May 3/4, 2007**  
Time: **8:30 am**  
Location: Central Valley Regional Water Quality Control Board, Sacramento Office  
11020 Sun Center Drive, #200  
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is <http://www.waterboards.ca.gov/centralvalley> where you can access the current agenda for changes in dates and locations.

**D. Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

**E. Information and Copying**

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the Central Valley Regional Water Quality Control Board office in Redding, located at 415 Knollcrest Drive, Suite 100, Redding, CA 96002 at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (530) 224-4845.

**F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Mr. Greg Cash at (530) 224-3208.



## Attachment G – Bibliography

1. City of Biggs, *Report of Waste Discharge and NPDES Permit Application for City of Biggs Wastewater Treatment Plant*, submitted May 19, 2005
2. City of Biggs, NPDES Form 2A Application Overview & EPA Permit No. CA0078930, submitted June 3, 2005
3. US EPA, Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001 (TSD), March 1991
4. State Water Resources Control Board, California Environmental Protection Agency, *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California*, March 2, 2000 (Revised February 24, 2005)
5. State Water Resources Control Board, California Environmental Protection Agency, *Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*, September 1975
6. California Regional Water Quality Control Board, Central Valley Region, *Fourth Edition of the Water Quality Control Plan (Basin Plan) for the Sacramento River and the San Joaquin River Basins*, September 15, 1998 (Revised September 2004)
7. US EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California (California Toxics Rule), 40 CFR Part 131, Federal Register/Volume 65, No. 97, May 18, 2000
8. U.S. Environmental Protection Agency, Office of Water, National Recommended Water Quality Criteria -- Correction, EPA 822-Z-99-001 (April 1999), <http://www.epa.gov/ost/pc/revcom.pdf>.
9. Ayers R.S. and D.W. Westcott, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome, 1985.